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ABSTRACT

A practicum was implemented to train teachers working at a Montessori Learning Center to individualize instruction at the preschool, primary, and intermediate grade levels. The primary goal was to educate teachers about the importance of meeting the individual needs of each child. A 9-month staff training program was developed that provided the instruction, strategies, assistance, coaching, and training in evaluation skills that teachers needed to function effectively in the context of an individualized approach to instruction. The program consisted of: (1) eight weeks of preliminary training sessions; (2) two weeks of student evaluations; (3) two weeks of teacher evaluations; (4) 27 weeks of program implementation and ongoing training sessions; (5) posttesting; and (6) final program evaluation. Four teachers participated in the training program. Evaluation data indicated that students grew socially, emotionally, psychologically, and academically. Teachers successfully individualized students' work, used various instructional methods, analyzed and evaluated students' progress, and improved their own knowledge of classroom materials and understanding of individualized instruction. Eighteen appendices contain related materials. (RH)

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IMPLEMENTING A TEACHER TRAINING PROGRAM TO DEVELOP SKILLS TO INDIVIDUALIZE PRESCHOOL, PRIMARY, AND INTERMEDIATE CLASSROOMS

BY

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NOVA UNIVERSITY

IMPLEMENTING A TEACHER TRAINING PROGRAM TO DEVELOP SKILLS TO INDIVIDUALIZE PRESCHOOL, PRIMARY, AND INTERMEDIATE CLASSROOMS

PRACTICUM II SUBMITTED TO THE FACULTY OF THE
EARLY CHILDHOOD EDUCATION PROGRAM
IN CANDIDACY FOR THE DEGREE OF

DOCTOR OF EDUCATION

BY

SHARON M. CARLSON

NOVA UNIVERSITY
CLUSTER 15

March 1988

PRACTICUM APPROVAL SHEET

This practicum took place as described.

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This practicum report was submitted by Sharon M. Carlson under the direction of the adviser listed below. It was submitted to the Ed.D. Program in Early Childhood and approved in partial fulfillment of the requirements for the degree of Doctor of Education at Nova University.

Approved:

March 5, 1988
Date of Final Approval of Report

Muriel L. Lundy (signature)
Muriel L. Lundy, Ed.D., Adviser

ABSTRACT

Implementing a Teacher Training Program to Develop Skills to Individualize Preschool, Primary, and Intermediate Classrooms. Carlson, Sharon M., 1988: Practicum Report, Nova University Ed.D. Program in Early Childhood
Descriptors: Staff Development/Teacher Training/Individualized Education/Individualized Instruction/ Elementary Education/Children/Preschool Children/Preschool Education/ Primary Education

This practicum provided for the planning and implementation of a teacher training program to develop the skills needed in order to individualize preschool, primary, and intermediate classrooms at the Montessori Learning Center. The primary goal of the practicum project was to educate teachers to the importance of meeting the individual needs of each child in a classroom--social, emotional, and psychological--not just intellectual. This was accomplished by developing a 9 month staff training program that provided the instruction, strategies, assistance, coaching, and evaluation skills necessary for teachers to function effectively in a classroom where learning and instruction was individualized. The secondary goal was to meet the needs of each child as a unique individual and help each child to truly develop his/her potentiality. Teachers saw improvement in the children's behavior, motivation, learning, and self-esteem and recognized the value of individualized instruction to bring about these changes.

The program consisted of six steps: (1) 8 weeks of preliminary training sessions; (2) 2 weeks of student evaluations; (3) 2 weeks of teacher evaluations; (4) 27 weeks of implementation and on-going training sessions; (5) posttesting; and (6) final program evaluation. Four teachers participated in the program. Students in the preschool, primary, and intermediate classrooms were evaluated before and after the program, as were the teachers.

The testing affirmed positive social, emotional, psychological, and academic growth by the students. Teachers' evaluation tools indicated that teachers successfully individualized the students' work, utilized various instructional methods, evaluated and analyzed students' progress, and improved their own knowledge of classroom materials and understanding of individualized instruction.

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CHAPTER I

INTRODUCTION

Writer's Work Setting, Roles, and Responsibilities

The setting for this practicum was the Montessori Learning Center, a small private school located in a city in a northeastern state. The Center consists of a preschool and elementary school licensed by the State Department of Education for preschool, kindergarten, and grades 1 through 7. The preschool includes children ages 2-1/2 through 5. Two classes are held with an enrollment potential of 40 children in each. One class is scheduled from 9:00 a.m. to 12:00 p.m. and the other from 12:30 to 3:30 p.m. The elementary classes consist of lower, middle, and upper elementary children. The children in lower elementary are ages 6 and 7. The children in middle and upper elementary are ages 8 and 9, and 10 through 12 respectively. Elementary school begins at 9:00 a.m. and ends at 3:00 p.m.

Babysitting services for both preschool and elementary children are available both before and after school. Parents who need day care for preschool aged children may enroll their children in both the morning and afternoon preschool and utilize the babysitting services if needed.

The classroom space for the preschool consists of three rooms, a locker area, and a large outdoor playground. One room is called the practical life room, the second is the playroom, and the third is the academic room. The preschool teaching staff utilizes two teachers and two teacher aides

in each class. One teacher stays in the academic room during the entire class time. A teacher or teacher aide covers the other areas. One is an assistant in the academic room, one covers the playroom and outdoors when necessary, and the third stays in the practical life room. They function very much as a team, covering for each other as needed in order to move with the flow of the children either indoors or outdoors and to deal with "crises" as they arise.

The rooms contain tables, chairs, and shelves of materials. In the practical life room, one area has shelves stocked with materials that can be used to create collages from scraps such as beans, pieces of cloth, noodles, and cotton balls; and there are tools such as scissors, pens, magic markers, crayons, stapler, paper hole punch, glue, and tape. These are kept on trays or in containers for children to use. Many kinds, colors, and shapes of paper are also available. One shelf contains trays of materials to be used for specific activities such as stringing noodles, snipping strips of paper, and using stamps and an ink pad. One or two tables are also set up with a special art activity for the day such as painting, cutting carrots, finger painting, and potato stamping. A workbench with a hammer, saw, vise, and wood scraps is also in this area. Another set of shelves has trays of practical life activities such as: rice pouring, button sorting, transferring water with a baster or eye dropper, using a tweezer or tongs, and a

variety of other activities that utilize eye-hand coordination and develop fine motor skills. There is also a sink, playdoh table, and snack table in this room.

The playroom contains a block corner; construction equipment corner; shelves of skill development materials such as puzzles, pegboards, bead stringing, and shape boxes; and creative materials such as bristle blocks and legos. A loft, blackboard, and book shelf are also located in the room. Under the loft are two child-size bathrooms.

The academic room contains the higher academic materials needed to teach young children reading, math, science, geography, and writing. An area containing sensorial materials is in this room as well as a quiet reading and listening corner. The outdoors is a closed-in area with a large sandbox, a tire swing, climbing stumps and pole, a two-story hut with a slide, jungle gym dome, a converted silo with two levels, and a large platform with a wide slide coming out of the second level. The enclosed area covers approximately a quarter acre.

When the preschoolers arrive at school, they hang up their clothes in their cubbies and go into the classroom and choose something to do. They spend nearly the entire class time moving from area to area and choosing activities to do. When they select something from a shelf, they work with it and then replace it on the shelf where they found it.

Teachers work with children as needed to show them how to do what they have selected, help them choose something to do if they are undecided, or help them find something else to do if they have selected an activity or piece of equipment that is too difficult. In the academic room, the teacher provides considerable guidance in the selection and use of materials since the academic materials follow a sequence of difficulty and require demonstrations to know how to use them. In this environment, the teacher's role is primarily one of a facilitator. He/she guides and assists children as needed but allows them freedom of choice and encourages them to work independently.

The last half hour of classtime is used to clean up and have a group activity referred to as "circle time." Circle time involves all the children who choose to participate. They sit in the academic room while a teacher presents a lesson, activity, or discussion. Special teachers come in to teach music, German, and movement education.

The kindergarten program, which involves all children who have turned 5, is incorporated into the classroom structure. The kindergarten teacher meets with these children in a corner area of the academic room. A lesson, activity, or project geared to their ability level is presented. This usually involves 30 minutes of time. Kindergarten children are then encouraged to complete a contract which consists of one activity that they choose and

one the teacher chooses. When they have completed this, they are free to move about the preschool with the rest of the children. The teachers keep records of the children's work on note cards or on a chart indicating the materials they have mastered.

The lower and middle elementary classrooms are in an adjacent building, while the upper elementary classroom is held in the main building with the preschool. A student-teacher ratio of 1:8 is maintained in the lower elementary and 1:10 in the middle and upper elementary classes. At all elementary levels, the morning is spent working on an individualized program of math, reading, and other subjects. The day is begun with a circle activity, and then the children work on their assigned tasks.

In the lower elementary, the emphasis is math and reading. One teacher works with each child in reading and one in math. Each child works with the teacher in these two areas at some time and then works independently on other related activities during the remainder of the class.

In the middle elementary, the children all have individual weekly contracts based on their ability levels and the sequencing of the materials. The teacher gives small group lessons to introduce new concepts or materials, and the rest of the time the students work on their individual contracts. They are free to choose what they want to work on from the contract and to do as much work in

a week as they are able to do. The primary source of their assignments is the lessons and materials. Textbooks and workbooks are used but are supplementary to the learning equipment. The upper elementary morning program is similar to the middle, with more group lessons and use of textbooks and workbooks.

The afternoon schedule for elementary children is primarily group activities and lessons. Special teachers come in to teach subjects such as physical education, swimming, German, roller skating, affective group, computer science instruction, and art. Twice a week, they have "specials" which is a program of experiential learning used to teach history, social studies, geography, and science.

A small room is used as a "clubhouse" in which the children and teachers reconstruct a certain era of history. When studying the caveman era, for example, the clubhouse is made into a cave and painted by the children; the children then meet for class in the cave. They become cavemen while in the cave; they make weapons, create fire from flintstone, make pottery out of sand, create a means of written communication, crush flour, and cook. As they work, they learn and discuss what it would have been like to live in this particular time in history.

Extensive record keeping is done by the teachers; however, there are no grades given on students' work and there are no report cards. Tests are used solely to

determine if children can use a piece of equipment without the answer cards or if they know the material. If they do not pass a test, they practice the material or activity until ready to take the test again.

All programs at the Montessori Learning Center follow the basic principles set down by Maria Montessori (1965). The cornerstone of this philosophy is respect for the child. She stated:

> As a rule, however, we do not respect children. We try to force them to follow us without regard to their special needs. We are overbearing with them, and above all, rude; and then we expect them to be submissive and well behaved, knowing all the time how strong is their instinct of imitation and how touching their faith in and admiration of us. They will imitate us in any case. Let us treat them, therefore, with all the kindness which we would wish to help to develop in them. (p. 133)

One way children are respected in the Montessori classroom is by recognizing that each child is a unique individual and, therefore, individualizing the educational program for each one. Montessori (1967) stated:

> Now, child life is not an abstraction; it is the life of individual children. There exists only one real biological manifestation: the living individual; and toward single individuals, one by one observed, education must direct itself. (p. 104)

Montessori (1966) also stated that children are not minature adults and should not be pressured into becoming what adults think children should be. She believed that:

> Because of this egocentric view, adults look upon the child as something empty that is to be filled through their own efforts, as something inert and helpless for which they must do everything, as something lacking an inner guide and in constant need of direction. In conclusion, we may say that the adult looks upon himself as the child's creator and judges the child's actions as good or bad from the viewpoint of his own relations to the child. (p. 20)

The Montessori philosophy is based upon the fact that children cannot help but learn. One is not educated by another--one must do it himself/herself. Wolf (1969) stated:

> Maria Montessori believed that no human being is educated by another person. He must do it himself or it will never be done. A truly educated individual continues learning long after the hours and years he spends in the classroom because he is motivated from within by a natural curiosity and love for knowledge. Dr. Montessori felt, therefore, that the goal of early childhood education should not be to fill the child with facts from a pre-selected course of studies, but rather to cultivate his own natural desire to learn. (p. 1)

Montessori (1967) frequently compared the young mind to a sponge which literally absorbs information from the environment. She stated, "It may be said that we acquire knowledge by using our minds; but the child absorbs knowledge directly into his psychic life. Simply by continuing to live, the child learns to speak his native tongue" (p. 25).

According to the Montessori (1966) philosophy, there are certain sensitive periods when children are more susceptible to certain behaviors and when they are able to learn specific skills more easily. She stated:

> A sensitive period refers to a special sensibility which a creature acquires in its infantile state, while it is still in a process of evolution. It is a transient disposition and limited to the acquisition of a particular trait. Once this trait or characteristic has been acquired, the special sensibility disappears. (p. 46)

Once this sensitive period occurs, it will not occur again with the same intensity that facilitates the acquisition of that skill. Therefore, the teacher must be alert to recognize a sensitive period when it occurs in a child. All children will experience the same sensitive periods but at different times, such as learning to walk, climb stairs, and write. Observation of children in order to recognize these

sensitivities and providing the optimum learning environment to pursue these needs is a critical role of the teacher.

A final basic principle of the Montessori philosophy is the importance of the use of hands to learn--learning at the concrete level. Wolf (1969) stated:

> Dr. Montessori always emphasized that the hand is the chief teacher of the child. In order to learn there must be concentration, and the best way a child can concentrate is by fixing his attention on some task he is performing with his hands. (p. 2)

The Montessori Learning Center reflects these principles by providing a place where children can learn individually and independently of adults. It is a place where children can do things for themselves, can come and go according to their needs and desires, and can decide for themselves what they will work on--thus educating themselves. Since children are free to move around and explore the environment at will, they will absorb what they find there. It does not mean that they are free to make unlimited choices since they must respect one another, and they are not free to take away the freedom of others. However, they are free to teach themselves and acquire the self-satisfaction that comes with self-learning and that generates continued learning.

The writer founded the Montessori Learning Center in 1973. Disillusioned with her 5 years of teaching experience

in public schools, she set out to create a school in which children could learn, be happy, and feel good about themselves. The Learning Center is the result of 13 years of effort applied toward achieving this goal.

At the present time, the writer is the director of the school and the head teacher of the middle and upper elementary class. She teaches the elementary children in the mornings. As director, she is responsible for administering all school activities; hiring, training, and evaluating personnel; presenting the school to visiting persons; admitting new students; providing for staff development; directing staff meetings; coordinating and developing curriculum; and handling all financial matters. She is assisted by the school counselor who is also the director of training and staff development.

The Community

The city in which this practicum took place is the county seat and is situated in the northeastern part of the United States on the western finges of a highly urbanized and industrial region. Distances to major cities range from 65 to 158 miles. The county is the eighth most populous county in the state (Lancaster Chamber of Commerce, 1984).

The county covers a land area of 945 square miles, and the city is very close to the center of the county. The land is one of the most fertile areas in the nation, making

the county the state's top agricultural area and the leading nonirrigated county in the United States. It ranks first in the state in dollar value of agricultural production, dairy production, livestock, and poultry. The major crops raised in the county are corn, hay, and wheat (Lancaster Chamber of Commerce, 1984).

Because of the unique mixture of historical and traditional interests, including the Amish religious sect, the county has become a tourist attraction for all parts of the nation. Tourism is a growing industry in the county, employing nearly 9,000 people.

The city began to develop as an industrial community before the American Revolution. This was due to the discovery of rich iron ore deposits and to its location as the point from which travelers outfitted for their journeys west. As early as 1726, it was a thriving and diversified manufacturing center. Because of this, skilled craftsmen have been trained in the community's plants, many of which have been established for over 50 years. Many nationally famous manufacturing, printing, technological, and pharmaceutical corporations are located in the county (Lancaster Chamber of Commerce, 1984).

Since 1960, the county has enjoyed unparalleled growth in population. The 1970 census showed a population increase of 14.9%, nearly 3-1/2 times as great as the rest of the state. It was the seventh of 67 counties in growth

percentage. Between 1970 and 1980, there was a 13.2% increase in population. The current population of the county is 362,346 which ranks it 110th in the nation. The population of the city is 54,725 which reflects a decrease, but there has been an increase in housing units. The per household effective buying income in the county is slightly above the national average (Lancaster Newspapers, 1983).

The township in which the Montessori Learning Center is located is the largest municipality outside the city. The public school system ranks first in the county in academics. The writer's school draws students primarily from the suburbs of the city. There are some students, however, who live outside the county and travel as far as 25 miles to attend.

Most of the parents whose children are enrolled in the Learning Center are above average in income and educational level. Many are professionals or business persons who hold a college degree, and some are teachers in public school or in the Center itself. There are some parents who appear to be unable to afford the school's tuition and make personal sacrifices to keep their children in the school. The school provides some partial scholarships, but they are very small in amounts and numbers.

CHAPTER II

STUDY OF THE PROBLEM

Problem Situation

Individualized instruction has been used at the Montessori Learning Center since the school opened in 1973 with a preschool and kindergarten program (see Appendix A). In 1977, a first-grade class was begun; and one grade was added each year thereafter through sixth grade. The elementary program has evolved into three classes with mixed ages--lower, middle, and upper elementary. Individualized instruction and team teaching has been utilized at all levels. Montessori, commercial, and teacher-made learning materials have been the main teaching tools used, while textbooks and workbooks have been used supplementarily .

Lack of knowledge on the part of teachers with respect to individualized instruction was found to be quite prevalent at the Center. Over the past 13 years, more than 40 persons have been employed as teachers or teacher aides. None of these persons had experience teaching in an individualized classroom before coming to the Center.

Training in the Montessori method of education and in the use of Montessori learning materials was received by many of the teachers from private training centers in two cities, both of which are over 50 miles away from the Center. Most of the teachers who enrolled in one of the Montessori training programs, however, did so after teaching for a year or more at the Center.

This training was helpful to familiarize the teachers with the theory and concepts of individualized instruction and with the Montessori materials that are in their classrooms. Any practical experience or training that was needed to teach effectively in an individualized environment had to be provided by the school itself after a teacher had been hired. Teachers in the preschool usually were hired first as aides and then moved to "teacher" status after practical "on-the-job" experience and Montessori training was received.

In the elementary program, essentially the same informal training was provided. However, there were no Montessori training courses at the elementary level available within commuting distance of the school. The only formal training available was the preschool Montessori training course. Practical experience was received "on the job," usually with a classroom team teacher who had a year or more experience teaching at the Center.

Staff training was further complicated by a high teacher turnover rate. The average length of service of nonsupervising teaching staff had been 2.3 years. As a result, the Center was receiving an average of 1 year of service for each year of on-the-job training. This return on investment was costly as well as discouraging to the administrative staff.

The problem of helping teachers to recognize the need for and utilize individualized instruction was not unique to the Montessori Learning Center. Leading educators have acknowledged the importance of individualizing education throughout history. The existnence of human variability was recognized by Plato when he proposed tests to measure individual traits that were important to the military. The need for education to recognize individual differences was pointed out by Comenius when he admonished teachers to take into account pupils' ages, intelligence, and knowledge. He suggested that teachers should adjust their methods and materials according to "nature" and begin instruction at the pupil's level. Rousseau went further and advocated something close to a tutorial system (Henry, 1962).

Yet, never before has there been so much evidence to support the need to adapt educational instruction to the individual needs of children. In this society, educators have long acknowledged the need for schools to attend to individual differences (Decker, 1983; Carrier, 1984; Charles, 1976). The National Society for the Study of Education devoted its 61st yearbook to the need and importance of individualizing instruction, stating that "no matter what difficulties they make for schoolmen, individual differences are real, inevitable, irradicable, desirable, and, indeed, essential" (Henry, p. 316).

In the classroom, teachers have recognized the importance of personalizing instruction. They have known that "the physical, intellectual, emotional, and social differences, so evident among their students, called for varied approaches in teaching" (Charles, 1976, p. vii).

Psychologists called attention to individual differences beyond the cultural and intellectual. They pointed out "the vital roles played in learning by such personal considerations as feelings, values, and self-concept . . . that learning devoid of personal meaning was cold and useless." The "new humanism" focused on "enhancement of the total individual person--intellect, emotions, values, morals, feeling" (Charles, 1976, p. 5).

As technology, growth, and rapid change cause more diversity and cultural variation in society, the need for educational methods to adapt to these differences have become even greater. Dunn and Dunn (1978) expressed their concern:

> Teaching methods in the 1980s should be very different from the approaches used in yesterday's classrooms. We are attempting to educate more children with varying levels of intelligence and diversified cultural backgrounds. These students have had varied emotional and psychological experiences, ranging from overindulgence to child abuse. These disparate youngsters have been exposed to highly stimulating technology and an

> exciting world in which survival is uppermost in the minds of many of their contemporaries. To bring them into a confining environment and to group them in a way that makes educational sense is virtually impossible unless we examine each of these complex individuals to identify exactly how he or she is likely to learn most effectively. (p. 2)

Decker (1983) addressed the impact of cultural differences on schools:

> We have a more diversified group of children to educate, and they come from several cultures . . . . Cultural and ethnic diversity is now recognized as generic to our national character. As a result, educators' tasks have become more complex. (p. 44)

Scientific research on the human brain provided more evidence that supported the need for individualization in the classroom. Hart (1978) explained:

> Each brain is highly individual, unique: it seeks out, demands, and will accept only what it needs next to "make sense" of surrounding reality, as it perceives that reality. This fact means that group instruction in an elementary subject is certain to fail. It is grossly brain-incompatible. (p. 394)

In spite of all the evidence, one still wonders how much is really being done by the schools to adapt and attend to the individual differences of students. Charles (1976)

suggested that even though the need has been recognized, few concrete plans have been made to meet the challenge:

> Authorities who admonished teachers to individualize instruction had not themselves done so. Nor had they drawn up workable strategies for teachers to employ. (p. vii)

In spite of this, teachers have found ways to better match instruction to students' needs by varying pacing, content, objectives, or activities. However, it has been done in a "piecemeal fashion" (Charles, 1976). Dunn and Dunn (1978) suggested that Public Law 94-142 has essentially demanded individualization by requiring "diagnosis, the development of related prescriptions, individualized instruction, and a tightly monitored process that includes parental involvement for all handicapped children" (p. 2).

The claim has been made that schools are largely "brain-antagonistic," that group instruction is "brain-incompatible," and that "careful observation shows that virtually no individualization actually occurs" (Hart, 1978, p. 394). Charles (1976) stated that the term "individualization" is a "shibboleth" and that few teachers really do individualize their instruction. He stated:

> Almost all teachers say individualization is important. Who would deny that a person learns better when being taught something worthwhile, suited to special needs, at a level neither too difficult nor too easy, with

> pacing neither too fast nor too slow, using materials and activities suited to a particular learning style or preference? Yet, few teachers individualize very much. (p. 54)

Dunn and Dunn (1978) accused schools of functioning in the dark ages when it comes to the teaching-learning process. Musgrave (1975) agreed that few teachers actually individualize their classroom instruction. He explained:

> Everyone talks about individualized instruction. Undergraduate students preparing to teach talk about individualized instructional strategies in classes where theory and practice are usually poles apart. Graduate students attend education classes and become sophisticated talkers and writers concerning individualized instructional concept and practices. Teachers attend local, state, and national meetings where the themes and entire programs are devoted to individualized instruction. Yet, few teachers actually practice individualized instructional strategies in their classrooms. (p. ix)

Charles suggested that the reason for the discrepancy between talk and practice may be that "it takes knowhow, careful planning, and some effort to get things going" (p. 54). Musgrave (1975) questioned if it might be that

"teachers have been taught to talk and write about individualized instruction, while they have not been taught how to implement these practices in their classrooms" (p. ix).

At the Montessori Learning Center, the administrators and supervising staff members had made a concerted effort to provide an individualized system of education and to help teachers learn how to implement individualized instruction in their classrooms. Yet, more training was needed.

This practicum addressed the problem of providing a training program for teachers at the Montessori Learning Center that would enable them to work effectively in an individualized classroom setting in both the preschool and elementary programs.

Documentation

The majority of the staff members hired as teachers or teacher aides at the Montessori Learning Center earned degrees in education, but they had little or no experience or exposure to classrooms which utilize individualized instruction. Over the past 13 years, 28 college graduates with degrees in education were employed at the Center. Of them, only one had extensive exposure to the philosophy and practice of individualized education. Twenty of the teachers received training in the theory and concepts of individualized instruction when they enrolled in the Montessori training course at a private training center.

All the teachers who received this Montessori training did so after they graduated from college and usually because they wished to teach in a Montessori classroom. Thirteen teachers took the Montessori training course after being employed at the Montessori Learning Center, four took the training as a prerequisite to being employed at the Center, and three had received Montessori training prior to being employed at the Center.

This lack of experience encountered at the Center illustrated a lack of teacher knowledge regarding individualized education. As a result, the Center itself had to train teachers in strategies for individualizing instruction. Various methods or means of training were employed, mostly in a piecemeal, hit-or-miss fashion, and with varying degrees of success.

In the preschool, teachers were required to take the formal Montessori training either as a prerequisite to working in the classroom or after working in the classroom for a year as a teacher's aide. This training was also required as a prerequisite to working in the academic room where most of the Montessori materials are utilized. In addition to the Montessori training, the director of the Center also attempted to provide on-the-job training and supervision of the new teachers. However, as the school grew, this became increasingly difficult.

A retired teacher from the Center had also served as an on-the-job trainer. She observed the new teachers and met with them periodically until they were comfortable enough to be on their own. This was quite effective, but costly, and only possible when a "former teacher" was available.

Another means utilized to train staff was to have people who were interested in teaching in the preschool serve as substitutes for a year. Thus, they could receive preliminary experience before being hired full time. An "ad hoc" manual for the substitutes was devised with role descriptions and "pointers."

Of the various training methods tried at the Center, the most successful was the program in which a teacher served as a substitute teacher the first year and as a teacher's aide the second year, took the Montessori training the second summer, and then became a regular teacher in the classroom. The main drawback with this sequence, however, was the length of time required to complete the training.

Over the past years, the number of Montessori schools and training centers in this country has increased. As a result, more people had been applying for teaching positions who already had Montessori training or experience. This had helped to decrease the amount of training necessary by the Center.

At the elementary level, the problem of teacher training was much greater. The availability of Montessori

training for elementary education was very limited. The amount of commercially produced learning materials that could be utilized in an individualized classroom was also limited or costly. Therefore, most of the learning curriculum in the individualized classroom, other than textbooks and workbooks, had been teacher made. A large quantity of these materials was needed for an individualized class to function smoothly and effectively. Becoming familiar with the available materials took a great deal of time for new teachers.

In addition, classroom management at the elementary level was more demanding. Without training or experience, many teachers who could comfortably and effectively function in the preschool had considerable difficulty in an individualized elementary classroom.

The method of training elementary teachers used at the Center was a modified team-teaching approach. In the lower elementary, new teachers served as aides to the experienced teachers. However, this was possible simply because circumstances permitted. There had always been an "old" teacher on the elementary staff which enabled hirees to serve as aides their first year.

In the middle elementary class, this method was not as effective. The student-teacher ratio was higher, there was a larger quantity of learning materials, and a more extensive curriculum. A great deal of time was required for

teachers at this level to become familiar with the content, use, and sequence of available materials.

The teacher's task in this classroom was further complicated when children transferred to the class from a traditional school. These children often had difficulty adjusting to the demands of an individualized program. The teacher's role as facilitator for these children involved helping them to become more active participants in the learning process after spending several years in a "teacher-centric" environment where they were expected to be passive learners.

To train teachers at the middle elementary level, the writer served as the "experienced" teacher in the class, using a trainee as an aide. However, with the growth of the program, additional classes and experienced teachers were needed to staff these classes. Circumstances did not always provide the experienced teachers who were needed.

An examination of the programs and means of training incoming teachers at the Montessori Learning Center indicated that a good deal of effort had been made to familiarize teachers with the philosophy, concepts, and effectiveness of individualized instruction as well as provide practical "on-the-job" experience. However, these efforts were piecemeal attempts and relied heavily on circumstances. Clearly, a formal, structured, well developed teacher training program was needed at the Center.

Analysis of the Causes

Historically, the primary goal of education has been the development of intellectual skills. Former Vice Admiral Hyman Rickover defined this role when he said: "A school system performs its proper task when it does a first-rate job of equipping children with the required knowledge and intellectual skill for successful living in a complex society" (Alexander, 1967, p. 5).

More recently, Goodlad (1983) conducted research to determine what parents, teachers, and school officials thought should be the goals of education. They all agreed that schools should emphasize academic goals. They also felt that social, civic, vocational, and personal goals were of great importance. Even though the public has acknowledged a need for broader and more personal goals, schools still concentrate primarily on academic goals.

Wasserman (1984) believed that intense concentration on academics takes place in times of social and political unrest. He stated:

> This concentration on academics usually intensifies in times of political or social unrest--a process that repeats itself with nauseating regularity about every 10 years. At such times, we typically demand that schools give us fewer frills, stricter discipline, longer hours, more homework, and more emphasis on "basic" skills. (p. 691)

Wasserman further suggested that this era of unprecedented technological achievement is exerting pressure toward academic emphasis.

A look at the curriculum content of teachers' colleges indicates the direction in which educational systems are moving. A review of required courses for teacher education at three colleges in the writer's area reflects the continued emphasis on academics. The majority of courses deal with methods of teaching academic subjects. By comparison, courses on human development, child psychology, creativity, and individualizing education are still minimal.

Of the graduate courses in elementary education offered at one state university, 12 relate to reading and language arts; 13 deal with social studies, science, and math; 2 are on methods of individualizing instruction; 1 is on creativity; and 1 is related to the affective domain (Millersville, 1983-85).

At a private college, 18 courses are offered in elementary education. None of these courses deals with individualized education (Elizabethtown, 1985-87). Of the 27 courses in education offered at another state university, one course examines the process of individualizing instruction (East Stroudsburg, 1985-86).

Musgrave (1975) referred to the predominant teaching method still used in the schools today as "teacher-centric." The focus in teaching-learning situations is on the teacher;

and the learning methods utilized include lectures, teacher demonstrations, and recitations.

Publishing companies provide further evidence that traditional teaching methods and tools are still primary. Other audio visual types of materials are available but are presented as supplementary to basic texts. Publishing companies produce what sells. A review of the catalogs of five major publishing companies showed that what sells are textbooks, workbooks, and paperwork on the major academic subjects.

Catalogs from five major publishing companies were reviewed: Ginn (1986); Harper & Row (1985); Houghton Mifflin (1986); MacMillan (1985); and Harcourt, Brace & Jovanovich (1987). Supplementary learning kits for beginning reading were offered by two of the companies; the balance of the materials displayed in the catalogs (totaling 110 pages) was devoted to textboks, workbooks, worksheets, and other traditional learning tools.

One company, in addition to a beginning reading kit, offered a few supplementary music materials in its 41 page catalog. Another catalog (75 pages) displayed a beginning reading kit, spelling letter cards and trays, and a manipulative aids kit for mathematics. Only one of the five companies offered a substantial amount of supplementary learning materials that could be used effectively in an individualized classroom--seven in the area of reading, one

kit of manipulative materials in math and another materials kit, and one lab kit in science. However, taken in the context of 93 pages of materials, this is still a minimal amount.

The curriculum regulations of the State Board of Education (Penna. Dept. of Education, 1984) required that subjects be offered dealing with academics, arts, music, and physical education. The only requirement outside these traditional subjects was one-half hour per week of "humane education" for all pupils up to and including the fourth grade. A definition of what was meant by "humane education" was not given.

Curriculum goals set by state and local school districts expect children to cover a certain subject in a certain year. Children are expected to know addition and subtraction facts by the end of a certain grade, to be able to write in cursive by the beginning of another grade, and so on. Expectations such as these pressure teachers to treat classes as a whole since all children are expected to master the same skills or subject matter by a set time.

Other factors exist in schools and in society that inhibit the move towards individualizing education. People tend to be comfortable with the same method of education that was used when they attended school. The feeling of nostalgia, when one is reminded of his/her "school days," is one most people enjoy. Resistance to change, especially

something radically different, is always present in human nature. An example of such change is from a classroom that is orderly and quiet to one that seems confusing and noisy. This is the case when one compares a traditional classroom to an individualized environment where groups of children may be working independently rather than on class-wide uniform assignments (Henry, 1962).

In addition, there is clearly an inadequate amount of instruction at the college level on the concepts, philosophy, and value of individualized education. Consequently, very little individualization occurs in public schools. Few teachers realize the degree to which individualized instruction can help pupils develop their potential abilities and personal resources, thus enhancing their self-esteem.

At the Montessori Learning Center, the foundation is set for individualized instruction. The school is organized for it, the learning tools are available, the curriculum guidelines are flexible, and goals and expectations are set for all children to receive a program of instruction that will best meet their individual academic, social, and affective needs.

The lack of experience and training on the part of teachers coming into this setting was obvious. Efforts were made to provide the needed training, but at best they were a patchwork of efforts. What was clearly needed was a well

planned teacher training program that would provide philosophical understanding of the concepts of individualized education, awareness of its values and importance in an increasingly diverse and changing world, and the skills necessary to function effectively in a classroom that was so different from the traditional classes they knew as children and were trained to teach.

Relationship of the Problem to the Literature

Individualized instruction in preschool and elementary classrooms calls not only for a major change in the approach to education but fundamental changes in "our concept of schooling and teaching" (Weisgerber, 1971, p. 345).

When the National Society for the Study of Education (Henry, 1962) presented the need to individualize instruction, educators were cautioned to not equate individualized instruction with individual teaching or tutoring. The report stated:

> The individualizing of instruction has reference to the steps taken to meet the needs of pupils, each of whom is a unique individual. These steps will sometimes involve the selection and organization of content, but they will include, as well, the creation of situations in which pupils will work and be considered both as individuals and as members of groups. (p. 268)

To achieve this goal, major changes in school organization, curriculum, teacher roles, and teacher education were suggested.

Tyler (Henry, 1962) pointed out that schools would need smaller class sizes and flexible grouping. The structure of the curriculum would need to be flexible and less limited, and teachers should be able to select and develop instructional materials as well as methods for reaching the individual student.

Shane (Henry, 1962) also called for smaller class sizes as well as change in promotion policies that require subject mastery as a prerequisite to entering a higher grade. He pointed out that using grades for progress reports does not allow for "variations in pupil maturity, effort, and background" and called for a reporting system which "permits analysis of children's work with respect to both potential ability and actual performance" (p. 55). Shane also noted that examinations involve standards for "substantive subjects rather than for individual students" (p. 56) and that honor and awards only bring satisfaction to a few students and often those least in need of a feeling of satisfaction for their achievements.

Teachers need to understand children as individuals by becoming familiar with the "inner-world" of childhood and youth--both developmentally and culturally. Shane (Henry, 1962) called for teachers to gain experience in practicing

"democratic and mature helping relations in developing moral and spiritual values" (p. 54). Teachers have to be more aware of human differences when reporting "success" or "failure" in school. They need to find a means for helping to motivate average and below average pupils.

A developmental approach to recognizing human individuality was suggested by the Society (Henry, 1962). Such an approach would:

> continuously apply psycho-developmental research data for purposes of reformulating educational goals, restructuring school organization, and reorganizing instructional practices in a manner consistent with the demonstrable nature of children and youth in a given cultural matrix. (p. 57)

A developmental approach would guarantee the recognition of individual differences since the "uniqueness of each human being permeates increasingly the contributions of research in psychology and education" (p. 57).

Based on the research at that time, it was felt that a developmental approach would require schools to not only encourage but require varied rates of pupil progress; to report progress with respect to developmental characteristics such as potential ability, level of motivation, influence of social relationship, mental and emotional health, and academic performance in view of maturity and in comparison with group norms; to make subject matter

meaningful to the individual learner; to govern pupil progress based on a continuum of cumulative experience moving at personalized and uneven rates rather than a grade-level concept; to make program enrichment and related school activities available to all, rather than selection by skill or level of performance; not to rely on a single grouping plan; and to counter-balance large group instruction by small, close-knit groups guided by individualized experience (Henry, 1962).

Individualizing instruction also called for major changes in curriculum organization. Wilhelms (Henry, 1962) suggested that individual differences should be served through curriculum development in which "our fundamental line of solution must be to look to purposes as the common group element, while deliberately exploring an enormous range of ways of helping unique individuals towards those purposes" (p. 69). To do this, teachers would have to utilize cooperative planning with children, helping them to develop a sense of purpose and direction and together laying out a variety of approaches. Wilhelms suggested:

> The manner in which a curriculum is planned and organized can make a signal difference in the accommodation of individuals . . . . If what we seek is genuine attention to the individual, we shall have to provide room for radical differences in mode of approach . . . . We shall have to assume that only

> goals are universal, that content and method must be infinitely varied. (p. 73)

It was also suggested that manipulation of scheduling and nongraded elementary schools could be a means of opening the way to individualization.

Clymer and Kearney (Henry, 1962) pointed out that more noise and confusion would have to be accepted:

> Classrooms in which all pupils do the same thing, in the same way, at the same time are generally orderly classrooms. Unfortunately, such classrooms, as they appear to be at first glance, are not situations which provide the maximum learning for the students involved . . . . A classroom which is perpetually neat is a classroom in which nothing much can be happening. (p. 280)

Brownell and Tyler (Henry, 1962) concluded that the basic function of schools remains the same--to serve the best interests of society. To do this, conformity must be insisted upon in many matters--and the "school must educate in such a manner that its members will conform whenever such conduct is essential and desirable" (p. 326). They went on to say:

> At the same time, in order to assure its evolution, our society must with equal vigor insist upon diversity--and the schools must educate accordingly. The advancement of our society depends upon the presence in its

> constitutents of the full gamut of variability in human resources. (p. 326)

The task of the school then becomes two-fold: to "foster conformity without sacrificing diversity and to encourage diversity without preventing conformity" (p. 326). They continued:

> So, we conclude as we began: human variability is real, inevitable, ineradicable, desirable, and indeed essential. Nothing less than uniform acceptance of these facts and full recognition of their implications for education and for society will suffice even as a start toward the individualization of instruction. Human diversity is key to social progress and a challenge to better education. As far as the schools and instruction are concerned, we have a long way to go in making the most of the opportunities afforded in individual differences . . . . In our schools we must foster both conformity and diversity, neither at the expense of the other. (pp. 326-327)

Since 1962, many changes have been made in schools in an effort to individualize instruction. Some of the suggested changes in school organization, curriculum structure, teacher roles, and teacher education have been incorporated. Others have been tried and rejected, and still the need for individualizing education exists--and today the challenge is greater than ever before.

By the 1970s, educators were realizing that students were having difficulty covering the broad spectrum of basic knowledge in 12 years of school (Dell, 1972). Therefore, it was becoming important for students to develop the skills needed to become lifelong independent learners (Bechtol, 1973; Charles, 1976). The demand was made for more changes in the schools:

> The focus in an individualized program is on teaching learning skills, which many schools fail to do. Knowing how to learn is more important than a thousand memorized facts. Study skills, independent learning, and inquiry learning become much more valuable if the student is to continue learning after he leaves school. (Charles, p. 7)

With the explosion of knowledge, Charles recognized that educators would need to decide what content was important and this content would need to fit the individual:

> Everyone needs basic skills of computing, seeking, and processing information. These skills are tools, not ends in themselves. Beyond the fostering of such skills, schools must find ways to help students seek out information that has special importance, relevance, and meaning in their lives. (p. 6)

To provide a more relevant curriculum for students, Dell (1972) suggested that teachers and students work

together to determine the instructional objectives that each child will pursue. He urged the use of placement tests that would "give the teacher and student a general assessment of the student's acquired concepts and skills" (p. 95). He also recommended interest inventories to help "a teacher in guiding a student in choosing the objectives he will attempt to achieve" (p. 97).

Dell (1972) pointed out that the information obtained from these instruments should then be used to place a child "in learning guides with appropriate objectives for his developed skills, abilities, and interests" (p. 95). The learning guides should be presented in a format that would include: "(1) an objective and (2) a list of materials and activities designed to help students achieve the objective" (p. 61). This choice of activities would help students to feel more actively involved in their learning experience.

The need for a relevant curriculum was being recognized by other leaders. Bechtol (1973) stated:

> Students are giving a clear signal to adults that much of what they are asked to do in school is not relevant. They are looking for a more meaningful educational experience. (p. 16)

To provide this, Bechtol emphasized that teachers would have to change their role and become more of a diagnostician, prescriber, and facilitator, similiar to the role of a travel agent.

Additional changes were called for as students began to see themselves as individuals first and members of a group second. Dell (1972) pointed out:

> More and more students are insisting that they are, first of all, individuals, then members of a group. Yet at present, schools are doing little to help students understand themselves as people with individual problems, abilities, needs, and interests since they consistently force students into large group-learning situations. (p 16).

Dell recognized the need to help students become better decision makers as well:

> Students are not being helped to learn the techniques of decision making on their own initiative, let alone being allowed to make any meaningful decisions about their own education. Learning to make decisions is an intricate process that should be nurtured and encouraged from early school experiences on through adulthood. (p. 16)

The 1970s also brought a call for humanization of the schools and for utilizing the learning process to help students feel good about themselves. To do this meant that teachers would need to establish closer student-teacher relationships that would focus on the learner's needs (Bechtol, 1973) and that would be "warm, open, supportive, facilitative and nonthreatening" (Charles, 1976, p. 5).

To humanize education would require that the schools place emphasis on the welfare and growth of the individual. Aspects of the individual that would need special attention should include: dignity--a belief in the innate value of every single person; freedom--freedom to choose, to try, to feel; value--not imposition of values but clarification of values already held; feelings and emotions--acceptance of emotions as natural aspects of behavior; and concern--a fostering of concern for the well being of others (Charles, 1976).

Recognition of the need to humanize education brought new light on practices used in the schools which not only discouraged individualization but also dehumanized the students. Charles (1976) identified several such practices:

> an atmosphere of distrust instead of trust between teacher and student . . . continual emphasis on the "right answer" . . . the lockstep progression of students, where all go through the same activities at the same pace, in the same period of time . . . the conformity and boredom that usually accompany the single textbook approach . . . the shallow teacher-student relationships that result from "objectivity" (the treat 'em all alike attitude) and overcrowded classes . . . a marking and grading system that produces undesirable competition, odious comparisons,

damaging pressure, and an inevitable sense of failure for some students. (p. 6)

Humanizing education also called for curriculums which contain a rich variety of instructional material selected by the teacher but with students playing an increasing role in identifying areas of interest they want to pursue.

Finally, humanization recognized the need for teachers to stop "teaching" and start "facilitating." Rogers (1969) gave a clear description of a humanistic teacher's role as facilitator. Charles (1976) summarized Rogers' guidelines for facilitating learning:

1. Facilitators help draw out and clarify what students want to do.

2. They help organize the experiences students have identified and help provide a wide range of learning activities and materials.

3. They serve as flexible resources, to be utilized by members of the class.

4. They establish accepting classroom climates.

5. They behave as participant learners--as members of the group.

6. They take initiative in sharing their own feelings and thoughts with the group.

7. They recognize and accept their limitations.

The 1970s also brought to light evidence supporting the existence of differences in learning styles and the need for

teachers to identify and to match their teaching methods to each student's learning style (Bechtol, 1973; Dunn & Dunn, 1978; Musgrave, 1975). Musgrave stated:

> Evidence clearly indicates that students have different learning styles. No two students react to a learning situation in the same way. Therefore, teachers should have a wide repertoire of teaching methods so that they can match the appropriate strategy and technique to the particular learning style of each student. (p. 2)

In their investigation of research to find out how children and adults learn, Dunn and Dunn (1978) found repeated verification that "each student learns in ways that are different from his or her peers" (p. 4). These data suggested that learners are affected by their immediate environment (sound, light, temperature, and design); own emotionality (motivation, persistence, responsibility, and need for structure or flexibility); sociological needs (self, pair, peers, team, adult, or varied); and physical needs (perceptual strengths, intake, time, and mobility). They conducted further research to show that:

> (1) students can identify their own learning styles;
> (2) when exposed to a teaching style consonant with the ways they believe they learn, students score higher on tests, fact knowledge, attitude, and efficiency than do those taught in a manner dissonant with their style;

> and (3) it is advantageous to teach and test students in their preferred modalities. (pp. 4-5)

A Learning Style Inventory was then developed to help teachers identify each student's preferred style of learning.

As the 1980s approached, additional evidence was discovered that supported the need to individualize education. Research has found differences in cognitive styles--"the way in which a person perceives, encodes, stores, and retrieves information" (Carrier, 1984, p. 17). Cognitive differences call for further individual adaptation in the learning environment. Carrier divided cognitive styles into two categories: field independence and field dependence. Field independent learners tend to "restructure a stimulus field when it is beneficial to do so. They are less likely to accept a situation as given, and they tend to apply their own strategies to modification of the stimulus" (p. 17). Field independent learners participate more and use trial and error to test hypotheses. Therefore, they need more practice in order to acquire new concepts.

Field dependent learners, on the other hand, "use a narrow range of cues and focus only on those cues that are most salient" (p. 17). They tend to be more passive and spector-like when they test hypotheses. Decker (1983) expanded on these cognitive styles, pointing out that the field dependent learner is:

> sensitive to the support, feelings, and opinions of others and is more comfortable if there is a close, personal relationship with the teachers. He learns better in group activities and prefers to work cooperatively rather than competitively. (p. 46)

Decker also noted that the field dependent learner is verbally proficient and has more difficulty with unstructured material. The field independent learner:

> prefers to analyze parts of the whole or rearrange parts to make a whole when solving problems . . . is more independent of external judgment . . . prefers a more formal relationship with the teacher, and prefers to work independently and for individual recognition. This person does best on analytical tasks and tends to be skilled in spatial areas dealing with mathematics or science activities. (p. 46)

Decker (1983) examined the relationship between teachers' cognitive style and how it affects their style of teaching. Field dependent teachers display more warmth and approval and confidence in a student's ability to succeed. They tend to personalize and humanize the curriculum. Field independent teachers, on the other hand, have more formal relationships with their students. They encourage independence in achievement, thinking, and task orientation and emphasize facts and principles, inductive learning, and the discovery approach. Decker suggested that students'

learning styles and teachers' teaching styles can be matched so that they compliment rather than conflict with each other.

Individualizing instruction in the 1980s became even more complex when one examines how cultural differences affect learning styles. Decker (1983) pointed out that "cultural and ethnic diversity is now recognized as generic to our national character" (p. 44). She believed that cultures may produce certain learning styles and that attention needs to be given to the cultural aspect of learning. Cultural values influence the way one learns and ignorance of these values can lead to misunderstanding and conflicts.

Public Law 94-142 mandated that all children, including the handicapped, have a right to publicly supported education. This added another dimension to individualizing education. Teachers now work directly with children who have all kinds of handicaps, making their task even more complex.

Accumulated research and rapid advances in understanding the human brain have also had an impact on education in the 1980s. New insights into the nature and process of learning that have resulted from brain research have had profound significance for education. This new information calls for major reforms in the way schools are organized and operated if they are to become "brain

compatible." The brain has its own characteristic construction and way of functioning, which explains the "ineffectiveness of standard classroom teaching for large numbers of students" (Hart, 1978, p. 394). He discussed five aspects of the brain and their relation to teaching:

1. Group instruction has been based on a belief that the brain is passive--a blank tablet on which knowledge could be inscribed. Thus, teachers thought that if X and Y were taught, X and Y would be learned. Evidence now shows that this is not what happens. The human brain is in fact highly aggressive and individual. It "will accept only what it needs to 'make sense' of surrounding reality, as it perceives that reality" (p. 394).

2. The brain, once perceived to be a stimulus-response device is now known to be "gated." "It will admit only those inputs it decides to admit, and each brain processes what it does admit in its own individual way" (p. 394). As a result, what the brain admits may differ sharply from what a teacher intends. Therefore, the teaching methods of presentation, lecture, recitation, and discussion can no longer be considered reliable ways of producing learning.

3. The neocortex, or newer part of the brain, is five-sixths of the whole brain and has been found not to function well under pressure. When threatened, it "cuts short its elaborate, relatively slow processing, and 'downshifts,' so that the much older limbic system has more influence." Thus

when students perceive classroom activities as threatening "the learning that should occur in the neocortex is inhibited" (p. 394).

4. A large portion of the brain is devoted to language. In order to learn, one must talk constantly. Yet students are not permitted to do so.

5. Finally, the brain is not logical--it has little use for "tight, step-by-step, ordered, sequential, (linear) effort in verbal or symbolic form." It is far more "analog than digital . . . works not by precision but probabilistically, by great numbers of often rough or even vague approximation" (p. 394). Efforts by educators to make the curriculum and teaching "logical" are wasted.

Hart (1978) concluded that, based on these five points alone, "major reforms in the way we organize and operate schools must be made if schools are to become brain-compatible" (p. 398).

Knowledge gained on the functions of the two hemispheres of the brain has produced additional insights into individuality. By studying the separate functions of each side of a single brain, scientists have been able to determine which tasks are performed by the left hemisphere and which tasks are performed by the right. They have discovered that each side has its own areas of specialization and its own ways of processing information (Zdenek, 1985).

This knowledge has raised concerns that schools are spending most of the time teaching "left-hemisphere skills" while neglecting the mental capacity of the right brain (Springer & Deutsch, 1981). Claims have been made that schools and society show more respect for people who are "left brain dominant" while failing to recognize "right-brained" individuals (Springer & Deutsch; Zdenek, 1985). To rectify this situation, schools must also recognize individual differences in the functioning of the brain.

Clearly, the evidence overwhelmingly supports the need to individualize the teaching methods, strategies, and curriculum of schools. This calls for major changes and reform. If the needed changes are going to take place, ultimately teachers will make the difference.

Wasserman (1984) talked about schools of the future that help people to use knowledge wisely with a concern for humankind. She believed that teachers can make a difference, but to do so they will have to change. Teachers will have to:

> abandon their traditional role as judge and jury in the grading of pupils' work; move beyond their value-laden statements about the worth of pupils, beyond ranking students by letter and numbers, to evaluation that emphasizes the diagnosis of learning needs and ways of meeting them. (p. 693)

Wasserman (1984) asked some tough questions of teachers:

> Can teachers retrain themselves to respond to pupils' ideas with sensitive, intelligent questions aimed at raising the level of pupil thought? Can teachers learn to respond empathically to pupils' feelings, modeling respect, regard, and genuineness? Can teachers learn to listen to pupils and take their ideas seriously? Can teachers learn to respond in ways that preserve the dignity and self-respect of each learner? (p. 693)

If they can, Wasserman believed that teachers will be able to provide a learning environment that will not only be healthier and mutually nourishing but will motivate children to learn.

Twenty-five years ago, Clyer and Kearney (Henry, 1962) acknowledged that:

> Adjusting to the differences in ability, needs, and interests is a difficult task which calls for enormous resources in materials, ability, and skill on the part of the classroom teacher. But most of all, adjusting to individual differences calls for hard work, and lots of it. (p. 281)

Today, with the even greater range of individual differences evidenced among children, the task seems overwhelming. If educational environments truly are going to be individualized, teachers will need training, guidance, encouragement, many ideas, and specific instructions on how to identify and meet the individual needs of each child in the classroom.

CHAPTER III

ANTICIPATED OUTCOMES AND EVALUATION INSTRUMENTS

Statement of General Goals

This practicum was designed to educate teachers to the importance of meeting the individual needs of each child in a classroom--social, emotional, and psychological--not just intellectual. This general goal was to be accomplished by developing a staff training program that would provide the instruction, strategies, assistance, coaching, and evaluation skills necessary for teachers to function effectively in a classroom where learning and instruction are individualized.

For the children at the Montessori Learning Center, the solution would meet the needs of each child as a unique individual and help each child to truly develop his/her potentiality. The teachers would see an improvement in the children's behavior, motivation, learning, and self-esteem and would recognize the value of individualizing instruction to bring about these changes.

Behavioral Expectations

The following behavioral expectations were projected for this practicum. The objectives were applied to one preschool, one kindergarten, one primary, and one intermediate classroom teacher.

1. Teachers will demonstrate their ability to individualize work by establishing written, individual work

contracts that meet instructional objectives for two primary grade and two intermediate grade children on a daily or weekly basis over a 6 month period, as evidenced by the students' completion of their work contracts and mastery of instructional objectives.

2. Teachers will demonstrate at the end of the program their ability to function effectively in three individualized classes with 10 preschool, 5 kindergarten, 10 primary, and 8 intermediate students by using at least 8 out of 17 different methods of instruction over a 3 hour period of observation utilizing the Direct Instructional Methods Checklist (see Appendix B).

3. Teachers will demonstrate at the end of the program period their ability to provide at least five different methods of instructional and learning methods in their individualized kindergarten, primary, and intermediate classrooms over a 3 hour period as measured by the Student Behavior Checklist (see Appendix C).

4. Teachers will evaluate the progress of 10 primary and 8 intermediate students by administering the Student Behavior Checklist, Peabody Individual Achievement Test (see Appendix D), the Self-Concept Scale (see Appendix E), and the Social Skills/Self-Esteem Group Referral Form (see Appendix F) before and after the 10 month program.

5. Evaluate teachers' knowledge of the classroom materials by completing a checklist at the beginning of the

program which indicates the materials they do not know and by correctly demonstrating the use of those materials in a practical examination at the end of the program (see Appendix G).

6. Teachers will demonstrate their growth in understanding of individualized instruction by showing at least 15% improvement on a written test given at the beginning and end of the 10 month program (see Appendix H).

7. Teachers will demonstrate improved congruency between their educational philosophy and their educational practice beliefs by completing the Educational Beliefs System Inventory and the Educational Practice Belief Inventory before and after the 10 month program and showing scores that increase in proximity to one another.

Description of Evaluation Instruments

In order to determine teachers' ability to individualize work, an individual work contract system was utilized. Teachers set up work contracts on a daily or weekly basis that enabled students to meet diagnosed instructional objectives over a 6 month period. These contracts were examined to determine if students completed the work on their contracts and met the instructional objectives.

The Direct Instructional Methods Checklist (see Appendix B) was administered at the end of the training program to determine the teachers' ability to function

effectively in individualized classes. The Checklist itemizes nine different direct instructional methods. These include working one-to-one with a student, demonstrating learning materials to an individual or group, giving a test to an individual, instructing a small group of two or three children, instructing a group of four or more students, leading a discussion, involving a group in an affective activity, and leading the whole group in an activity. Noninstructional behaviors are also listed. These include observation, record keeping, organizing, correcting work, leading students to materials, dealing with negative behavior, encouraging students, and directing students to their work.

The Student Behavior Checklist (see Appendix C) was used to determine the teachers' utilization of different methods of instruction and learning. The Checklist consists of eight different learning behaviors evident in an individualized classroom. The instrument was used to observe students over a 3 hour period and measure the variety of learning behaviors being used.

The Student Observation Checklist was also used to evaluate students' progress. Individual students were observed before and after the program and the amount of learning versus nonlearning behavior recorded. It was used to determine if there was an increase in the amount of learning behavior.

The Peabody Individual Achievement Test (see Appendix D) was administered before and after the 10 month program to determine students' progress. This achievement test also helped determine whether students' diagnosed instructional objectives were met. The test is an oral test, administered individually and therefore more applicable to young children. It was administered to the elementary children only.

The Self-Concept Scale (see Appendix E) was administered before and after the program to determine if the students' self-images had been enhanced. The Scale consists of 48 questions about the students and their abilities as they perceive them to be. A simplified self-concept scale was devised for use with the primary children (see Appendix I). The students' answers on the two scales were compared to determine whether progress was made in a positive direction.

The Social Skills/Self-Esteem Group Referral Form (see Appendix F) was administered before and after the program to determine whether a positive change in children was effected. This report form is divided into four parts. It provides for the identification of three social behaviors that are perceived as problematic for the children and an indication of their severity using a scale of 1 to 8. A checklist of specific behaviors on which children may need to work is provided. Twelve social skills are listed, and

the children are rated on each skill using the same scale. Space is allotted for listing children's strengths and for making comments and observations. The scores from before and after the program were compared to determine change in either a positive or negative direction.

A checklist of materials that are in the classroom was provided at the beginning of the program (see Appendix G). Teachers indicated the material with which they were familiar, familiar but need training, and unfamiliar. At the end of the program, they were asked to correctly demonstrate use of the materials from the last two categories in a practical examination.

A written examination was devised to determine the extent of the teachers' understanding of individualized instruction (see Appendix H). The test contained 30 multiple choice questions and was administered after the first month and at the end of the 10 month program.

To assist the teachers in becoming aware of their own philosophy and beliefs, they were asked to fill out the Educational Beliefs System Inventory and Educational Practice Belief Inventory. This instrument helped the teachers to examine their philosophical beliefs and educational practices to determine the degree of congruency between the two. The Beliefs System is a list of 69 statements concerning various aspects of educational theory. Teachers are asked to make judgments based on what they

really believe, not on "how it is." The teachers indicate on a 5 point scale, from complete agreement to complete disagreement, what they believe about man, motivation, conditions of learning, social learning, intellectual development, knowledge, and society.

The Educational Practice Belief Inventory is a similar list of statements on various aspects of educational practice. Teachers are asked what they really believe about instruction, curriculum, organization, materials and resources, and evaluation.

The scoring of these two inventories determined whether there had been an increase in the degree of congruency between their philosophical beliefs and their practice beliefs (see Appendix J). A change in scores indicating an increase in congruency was the criterion for success.

CHAPTER IV

SOLUTION STRATEGY

Discussion and Evaluation of Possible Solutions

The administration at the Montessori Learning Center expressed a need for teachers who were trained or experienced in methods of individualizing instruction. Persons who had applied for teaching positions at the school had virtually no experience or training in this type of education. The school itself had to provide the training needed with one exception--formal courses in the Montessori method of education which are available in nearby cities during the summer. These courses instruct teachers on the use of the Montessori learning materials that are in the classrooms and familiarize them with the philosophy and concepts of individualized instruction as it was designed and developed by Maria Montessori.

At the preschool level, informal training procedures were used. New teachers were hired as substitutes whenever possible. They then took the Montessori training, after which they were hired as teachers. After a short term of "on-the-job" experience, substitute teachers could function effectively in certain areas of the preschool such as the playroom, creative area, and outdoors. However, until these teachers received the formal Montessori training, they were unable to work effectively in the areas of the classroom where the Montessori equipment is used. At best, this kind

of training was circumstantial and dependent upon the individual aptitude and adaptability of teachers.

At the elementary level, the training format described was less suitable. The formal Montessori courses cover most of the material used at the lower elementary level but none of the higher elementary materials. All teacher training at this level had been provided on the job and was totally dependent upon the most experienced member of a two-person team. Clearly, a formal teacher training program was needed at the Center.

One of the primary methods of retraining teachers is through staff development programs. There is general agreement that the purpose of such programs is "to improve the general quality of schooling for the participants" (Schambier, 1983, p. 2). How to effectively bring this improvement about has been a matter of debate.

Studies have shown that staff development programs that involve the active participation of teachers, clear-cut goals, and utilization of training transfer techniques have been effective in bringing about changes in the classroom (Waterman, 1974; Liserman & Miller, 1979; Schambier, 1983; Showers, 1984).

In 1983, at the annual meeting of the American Association for Adult and Continuing Education, Schambier (1983) reviewed the work of experts in the field of staff training. He concluded that staff development should be a

process in which both administrators and teachers set goals to improve the school or school system and to meet the needs of individual staff members while carrying out needed changes. He urged that staff development efforts be "guided by clear, straightforward goals . . . determined at least in part by those whose lives will be affected by intended outcomes" (p. 6).

Schiffer (Liberman & Miller, 1979) addressed the issue of change resulting from staff development. Personal change of staff is a basic aim of any staff development program. However, models that focus only on improving the classroom performance of individual teachers are not enough. Teachers are not just individual practitioners, they are part of a school staff. Therefore, the aim of staff development should also be to improve aspects of the total organization: communication, problem solving, cohesiveness, and morale. She suggested strategies such as organization development, T-groups, and sensitivity training for improving organizational health.

Showers (1984) recognized the importance of utilizing training transfer strategies. She agreed that through training which includes "theory, demonstration, opportunities for practice and feedback, most teachers acquire skills and strategies previously absent from their teaching repertoires" (p. 2). She also noted that, unfortunately, there is a failure to transfer these skills and strategies

to classroom practice, especially if the new knowledge is radically different from normal teacher styles.

Showers conducted studies involving the coaching of teachers and peer coaching to see if the transfer of learning to the classroom could be improved. The first study trained teachers in three models of teaching which represented new repertoires on their subjects. All teachers were trained together for 8 weeks (3 hours per week) utilizing presentation of theory, new strategies, demonstration, peer teaching with feedback, and practice in their own classrooms. Teachers were then tested on their conceptual level and interviewed to determine their attitudes toward the training and how useful they perceived the new strategies to be. They were then randomly assigned to either a coached or uncoached treatment period of 7 weeks.

All teachers were observed, and at the end of the 7 week treatment period they performed a transfer task. Transfer of training scores were made from the observations and transfer tasks. The findings showed that teachers who were coached transferred training at a greater rate. Within that group, teachers with high conceptual level scores transferred at a greater rate than those with low conceptual level scores. All the uncoached teachers, regardless of conceptual level, transferred training at a very low rate. Showers (1984) further found that at the end of the treatment period, all the teachers still reported positive

attitudes toward the training as well as intentions to use what they learned in the classroom.

A second study by Showers (1984) investigated the effect of peer coaching on transfer of new skills. After a 6 week training period, peer coaches observed their assigned trainees for one period per week and met with them following the observation, for coaching sessions. At the end of the project, the peer-coached teachers had higher mean transfer scores than uncoached teachers. In addition, the coached teachers unanimously agreed that the peer coaching was a positive experience both professionally and interpersonally. Showers concluded that the "provision of coaching following initial training . . . is essential for most teachers if new skills and strategies are to be appropriately implemented" (p. 6).

Another important consideration for staff development programs is to recognize and plan for individual differences of the participants. Griffin (1983) stated:

> It is important to acknowledge that people inhabit different roles, carry contrasting responsibilities, and bring to work sometimes unrelated and often conflicting points of view. These basic differences, when unaccounted for, have strong potential for building failure into a staff development program. (p. 230)

Dobson, Dobson, and Kessinger (1980) felt that in addition to recognizing differences, teachers must become aware of themselves--their beliefs, values, and philosophies. Teacher self-awareness, they urged, is a "potent force in facilitating a quality climate for living and learning" (p. xi). These educators felt that there was a direct relationship between the personal beliefs of a teacher and teacher practice. They pointed out that many teachers operated from a philosophical base that was unknown. Incongruence between one's behavior and philosophical beliefs can result in frustration and less effective teaching. Therefore, it is important that teachers become aware of their personal beliefs and that there be congruence between teachers' beliefs and day-to-day operation in the school.

To help teachers develop this self-awareness, Dobson et al. (1980) designed the Educational Beliefs System Inventory and the Educational Practice Belief Inventory. These instruments help to determine the degree to which a teacher's educational beliefs are congruent with his/her educational practice beliefs. Use of these instruments as a means of enhancing classroom learning is based on the rationale that when a teacher's educational beliefs and practices are in harmony:

> The true person of the teacher is released . . . . To a large degree the climate of any classroom is an

> expression of the consciousness level of the teacher. The teacher generally knows how he/she would like to interact for the good of self and others; however, due to imposed reality of role expectation, often behaves in a manner which is contrary to what is known. Any real improvement in schooling will occur only when each person's beliefs are in harmony with his/her behaviors. (p. 14)

Description of Selected Solution

The content of an effective training program was developed from the general goals and specific objectives set by administration and staff. The general goal for this practicum was to provide training that would enable teachers to function effectively in a classroom where learning and instruction is individualized.

The process of individualizing a classroom can be broken into steps. Dell (1972) suggested three steps: determining terminal and instructional objectives; providing suggested activities to help students achieve the instructional objectives; and designing evaluation materials to assess students' achievement of the objectives, identify appropriate objectives for each child, and provide continuing self-evaluation.

Dell (1972) defined terminal objectives as "statements of expected behaviors that can be observed after achieving a series of skills or concepts" (p. 23). Instructional objectives require the achievement of specific skills or

concepts. "The achievement of instructional objectives should culminate in the accomplishment of a terminal objective" (p. 14).

There are several roles teachers need to assume in an individualized classroom. These include classroom manager, curriculum counselor, tutor, and behavior modifier. Teachers need to acquire specific skills in order to function in those roles. Finally, teachers need to establish methods of record keeping and criteria for evaluating teacher performance (Dell, 1972).

A staff development program intended to train teachers to work in an individualized class needs to cover these general areas. Once terminal and instructional objectives have been established, teachers will need strategies for matching objectives to each child, taking into account that child's learning style, interests, skills, and abilities. Instruments that can assist in this process include learning style inventories, interest surveys, diagnostic tests, placement tests, self-check tests, and achievement tests (Dell, 1972; Dunn & Dunn, 1978; Charles, 1976).

The next task of teachers is to provide suggested activities to achieve the selected objectives. This should be done using a format such as a learning guide, learning unit, learning packet, or contract. The format should include the objective and a list of materials and activities designed to help students achieve the objective. Dell

(1972) described six different formats and suggested that teachers try different ones to see which they prefer.

Students' achievements can be evaluated using the instruments that were used to assess their needs, as well as more specific measurements. Charles (1976) suggested that students be a part of the process--expressing their own opinions of their achievement and whether they are personally satisfied with their efforts, work procedures, and progress. Dell (1972) suggested short, simple self-check tests through which children can evaluate their own progress toward a limited achievement of an objective.

Classroom organization needs to include arrangement and coding of materials for easy access and arrangement of study areas as well as activity areas where there can be more movement and noise. Record keeping in an individualized classroom is more complex and time consuming than in a group-centered class where children are all doing the same thing. However, keeping records of students' work and progress is important in order for an individualized class to function smoothly. Dell (1972) urged teachers to develop as simple a system as possible. The system should provide information on curricular data, student progress, student work schedules, and student behavior modification.

Teacher evaluations should be conducted to determine the extent of individualization taking place in a class. Teachers should interact with their students in a variety of

ways: counseling children on their choices of learning activities, helping them with their work schedules, tutoring, reinforcing, managing, and modifying behavior. The Teacher Involvement Checklist was devised by Dell (1972) to help teachers become aware of the kinds of involvement they are using in the class and to get an overall picture of how they are relating to the students.

Dell (1972) also devised the Student Observation Checklist which can be used to determine how effective teachers have been in modifying children's behavior and in helping children develop independent learning skills. Other checklists which cover the basic philosophy, concepts, and techniques of individualized education could be used to determine teacher learning.

Ultimately, the content of the staff development program will reflect the needs of those involved. Advocates of individualized instruction all have the same goal of "providing instruction that best suits the needs and abilities of each and every student" (Charles, 1976, p. 65). Yet, Charles noted that this is where the agreement stops. "No where can you see differing philosophies of teaching more clearly than in the forms individualized instruction takes" (p. 65). Because of these vast differences, the content of any teacher training program will vary considerably. The program needs to cover general ideas and strategies for individualizing instruction, skills and

techniques needed to function in the classroom, methods of classroom organization, behavior management skills, record keeping, and evaluation instruments (Dell, 1976). However, the specific content will vary, based upon the school and persons involved in the program.

Calendar Plan of Implementation

Weeks 1 - 8 Weekly Preliminary Training Sessions

Becoming familiar with oneself and each other

Setting terminal goals and specific instructional objectives

Identifying children's needs and matching objectives

Designing and setting up learning activity contracts

Developing student evaluation instruments

Exploring teachers roles in the classroom

Developing record-keeping systems

Evaluating teacher performance

Weeks 5 - 6 Student Evaluations

Administer Student Behavior Checklist

Administer Peabody Achievement Test

Students complete Self-Concept Scale

Administer Social Skills/Self-Esteem Group Referral Form

Weeks 7 - 8	Teacher Evaluations
	Teachers complete equipment checklist
	Teachers take written test
	Administer Student Behavior Checklist
Weeks 9 - 36	Curriculum Demonstrations
	Weekly demonstrations and instruction on use of learning materials
	Peer coaching and conference sessions
	Ongoing training sessions
Weeks 37 - 40	Posttesting and reporting
	Conduct student posttests
	Administer teacher posttests
	Administer Direct Instructional Methods Checklist
	Analyze results

Report of Action Taken

Weekly Preliminary Training Sessions.

Weekly 1 hour sessions were started at the beginning of the program and continued for the first 2 months. These sessions were to concentrate primarily on the strategies, teaching techniques, and organizational skills outlined by Dell (1972) as necessary components of a program designed to individualize instruction. Eight session topics were selected and agendas outlined for each one (see Appendix K). Flexibility was to be provided in the sessions in order to

adapt to the specific needs expressed by the teachers and administration.

Though an effort was made to cover the material outlined in the weekly agendas, after the first two sessions, it became evident that 1 hour was not sufficient time to do an adequate job. The writer therefore decided to extend the preliminary training sessions and make the training an ongoing part of weekly staff meetings throughout the program year. The agendas served as a guide from which to select topics that could be used to meet the needs expressed by the staff or recognized by the writer and the school psychologist. Depending on staff needs, greater emphasis was placed on some topics. Other areas of concern not covered on the agendas were also included in the training sessions.

Agenda #1: Becoming familiar with oneself and each other. Since there were several new teachers on staff, the writer and the school psychologist decided to spend several sessions helping teachers become familiar with each other and to develop self-awareness. The Learning Center holds an annual staff retreat which was an ideal setting for meeting this objective.

During the preliminary sessions, several instruments were administered to identify and measure communication and learning styles. Staff members completed and scored the activities and then shared the results. These instruments

assisted the staff in becoming more familiar with their own learning and teaching styles and comparing themselves with other members of the group. The results were used as a catalyst for discussion and sharing about themselves. Teachers were able to evaluate the results and determine whether they agreed with the findings about themselves. One staff member verbalized her discomfort with one description of herself. It was made clear that these were only informal measurement devices and that it was up to the individual to observe himself/herself and determine whether he/she felt the analysis to be accurate.

Other activities were used to help staff members observe their own behavior. These activities were demonstrated as affective activities that could be used with children in small group circles. One activity frequently used at the school is the "focus circle." Teachers were given literature on how to perform this activity and topics of discussion that could be used. A focus circle was demonstrated using the teachers as participants. The circle itself, as well as the discussion that followed, enabled staff members to study their own behavior and feelings and share them with one another.

Throughout the school year, other affective activities that could be used with children were described and frequently performed. One activity was an introduction game in which staff members paired off and spent 10 minutes

getting information from their partner about himself/herself. They then took turns introducing each other to the rest of the group.

Participating in these activities and discussing one's feelings and self-observations afterwards were effective means of developing self-awareness as well as becoming more familiar with each other. A presentation on defense mechanisms was made and the staff was encouraged to examine which of the four mechanisms--blame, denial, anger, or withdrawal--they intended to use when put on the defensive.

The Educational Belief Systems Inventory and the Educational Practice Belief Systems Inventory were administered as a pretest. The purpose was explained, and staff members took the test together during the session. Since some negative test taking behavior was exhibited by members of the group, which may have had an influence on some of the others who were taking the test, the writer decided to have the teachers complete any future tests privately.

The writer tabulated the results of this instrument and presented them at a later staff meeting along with literature describing the three philosophies of education measured by the inventories (see Appendix L). A lengthy discussion ensued concerning the philosophy of education that is presented by the Montessori Learning Center. Topics included the use of pressure in academics to increase production, society's emphasis on production, the issue of

social needs interfering with academics, and the importance of reinforcing the school's philosophy to parents in future parent conferences.

Several articles were presented to the teachers and discussion followed. The article "The New Brain Concept of Learning" (Hart, 1978) dealt with the implications of recent brain research on learning and educational structure. Staff members discussed the aspects of new brain research that significantly strengthened the philosophy and concerns of the Center's educational program. The research findings reinforced the use of individualized instruction, enriched environment, and nonfailure instructional techniques.

The article "How to Succeed Without Even Vying" (Kohn, 1987) was also read and discussed, again noting the research that strongly supports individualized education and the importance of minimizing competition and encouraging cooperation in educational systems. The means by which an individualized program promotes cooperation and impedes competition were examined.

Agenda #2: Setting terminal goals and specific instructional objectives. After talking with the staff about instructional objectives, the writer recognized that designing instructional objectives is a skill emphasized in most teacher education programs and utilized in traditional education. Since the staff members all had had experience

writing objectives, either in courses they had taken or in their teaching experiences, it did not prove to be an area of significant need for this particular group.

Agenda #3: Identifying the needs of children and matching objectives to those needs. The Peabody Individual Achievement Test was demonstrated to staff members as a means of identifying individual needs. The results of the tests administered to the elementary students were used to develop instructional objectives.

The Self-Concept Scale was used as a sample survey test. Staff members recognized that the scale was too difficult for primary children and devised a modified form for use with the younger children in the program. A teacher-made phonics survey was explained and used in the primary class to determine educational needs and to develop instructional objectives for the children in the area of phonics.

Means of identifying educational needs, other than tests, were discussed. Learning materials, a major part of any Montessori curriculum, were presented as a means of determining individual needs or as an informal screening instrument. Teachers were shown how to take children through a series of materials, graduated in difficulty, in order to identify their ability levels in a particular area of the curriculum.

Agenda #4: Designing and setting up learning activity contracts. The lists of learning activities available in the classroom, curriculum objectives, and evaluation techniques were presented to the staff. Time was spent with individual staff members discussing each student and his/her individual needs. Past records, achievement tests, teacher observations, and recommendations were utilized to establish instructional objectives for each child.

Various learning contract formats were demonstrated. A daily and weekly format was utilized in which assignments were provided by teachers with flexibility in order to provide for individual needs, interest, and motivation. The preschool contract consisted of a list of activities which could be used to meet the instructional objectives for that child. The contract was utilized by the teacher as a guide. The teacher and child were given flexibility to choose which activities to complete, depending on the child's interest and motivation.

The contract for the primary students was similar to preschool's, with more structure. Primary children were expected to complete mathematics, reading, and language arts activities each day and were not given as much freedom of choice. Teachers, however, still had the freedom to adjust expectations and activities according to the child's individual needs on a daily basis.

Children in the intermediate group were given weekly assignment contracts which they were expected to complete. The activities on the contract were selected by the teacher with input from the students. Again, flexibility was provided for students to pursue interests along with the required goals.

A discussion of learning styles was held, utilizing the learning style inventory that the teachers had completed in an earlier session. Staff members examined their own learning style differences and compared them to the students'. They discussed the importance of identifying and being sensitive to the students' learning styles when determining learning objectives and activities. The staff was urged to be aware of the differences between their own learning style and that of the students. The tendency was explored for teachers to provide activities that match their own learning style, rather than the students'.

Agenda #5: Developing evaluation instruments to measure students' achievement. The Student Behavior Checklist, Peabody Individual Achievement Test, Self-Concept Scale, and Social Skills/Self-Esteem Group Referral Form were presented to the staff. The purposes of the instruments were discussed and their administration was demonstrated. When it became evident that the Self-Concept Scale was too advanced

for primary children, the staff helped devise a modified form.

Informal evaluation measures were discussed. The staff felt that anecdotal records were especially important in preschool and much effort was spent devising an efficient, yet effective, means of taking down and organizing anecdotal records in the classroom.

The use of activity charts as a means of evaluation was established. When a child successfully completed activities, it was indicated on a chart which teachers could use to monitor his/her progress.

Discussion was held concerning the importance of using evaluations in a manner that builds self-esteem. Teachers recognized that this was critical to the success of an individualized classroom. They discussed their own attitudes regarding pass/fail tests and methods of presenting tests so that failure would simply indicate a need for more practice without having negative connotations--mastering a concept or skill could be presented as a challenge that could and would be met with sufficient work.

The use of self-evaluation--letting children check their own work--was discussed. Since self-evaluation is inherent in the Montessori philosophy of education, staff members easily recognized the importance of this form of evaluation as a means of minimizing the negative effects of mistakes and/or failures.

Agenda #6: Exploring the classroom roles of the teacher. The role of the teacher as a classroom manager is critical to the successful operation of an individualized classroom. The importance of management was a major topic of discussion throughout the school year. Maintaining order and discipline seemed to be the greatest need on the part of the staff, due to the presence of a few particularly difficult children in the elementary classroom.

The need to set clear ground rules at the outset was discussed early in the year. Most children were able to function responsibly in the classroom, getting and returning materials, finding a place to work, and working with teachers and students, all without being disruptive.

Since there is a good deal of movement and interaction going on in an individualized classroom, the successful operation of this kind of program also depended on good classroom organization of materials, proper facilities for storing materials, and provision of study areas where children can work without distraction.

Maintaining a relaxed atmosphere, proper noise level, and noninterference became a problem during the school year as a result of one or more children who did not have the self-control needed to function within the ground rules. Consequently, a great deal of staff training time was spent identifying problem behavior and possible causes, developing and implementing strategies for changing behavior, evalua-

ting the results, and finding alternative strategies either because the initial strategies were unsuccessful or because the changing classroom dynamics required a change in strategy. This process of behavior modification was utilized throughout the year.

One example of the need to modify behavior ocurred when the staff realized that classroom discipline had deteriorated at a very slow pace and went unrecognized until a major disruption occurred. When this happened, immediate and strong action was required in order to bring the class back on track. The action that the staff chose was a severe restriction of freedom. A discussion was held with the students regarding freedom as a privilege that is lost when abused. It was decided that in order to modify behavior, specific freedoms such as choosing where to work, working together with friends, moving around at will, etc., would be taken away and students would have to earn them back. A system was set up whereby the class could earn back one freedom at a time. After a period of time, staff members realized that this was not working as well for the older children since most were behaving very well, but one or two children were repeatedly spoiling it for the rest of the group. After a problem-solving session with the group, it was decided that the children would be permitted to earn back their freedom individually, rather than as a group.

As problems occurred with individual children, various strategies were tried and evaluated. These included a report system with the parents, placement or isolation in the classroom, rearrangement of desks, and temporary removal from the classroom. A great deal of time was spent in staff meetings discussing the problems and developing strategies. The staff recognized the importance of identifying problem behavior early as a means of preventing more serious problems from developing. This meant that teachers needed to be on the alert at all times. Also important was the willingness to evaluate and discard strategies that were not working and devising new strategies as needed.

Agenda #7: Developing effective and efficient record-keeping systems. The importance of record keeping was discussed with the staff. Most teachers were readily aware that an efficient and effective system was critical to the running of a successful individualized program. Records were used to keep track of work, evaluate progress, determine future activities, and for parent conferences and reporting.

In the elementary and kindergarten programs, a system was usec in which the contracts could be used as a major part of the record-keeping system. At the end of each week, a copy of the completed contract was stapled together with the child's work for the week and sent home to the parents.

The original contract was used to record completed activities on a progress chart, evaluate students' accomplishments, select activities, and set up the next week's contract. This system proved to be both efficient and simple, requiring a minimum amount of extra writing, and still met all the requirements of an effective record system.

Agenda #8: Evaluating teacher performance. The Direct Instructional Methods Checklist and Student Behavior Checklist were introduced as a means of evaluating teacher performance. The equipment checklist and the test on individualized education was administered. The importance and effectiveness of self-evaluation was discussed, particularly in relation to the Montessori philosophy which encourages self-evaluation and self-discipline among students. The staff recognized that being aware of one's actions and movements in the classroom is related to self-awareness, reinforcing the value of the self-awareness activities that had been a large part of the training.

Other techniques of evaluation that could be used were presented, e.g., peer observation and peer coaching. The existence of an observation room with one-way mirrors proved valuable for use in peer observation. It allowed staff a chance to step outside the classroom and get an overall and more objective view of how the class was functioning. Staff

set up times to observe and then reported their observations to the staff. The writer and the school psychologist served as peer coaches.

Pretesting Sessions - Student and Teacher Evaluations.

Time was provided for teachers to administer pretests to students. The instruments used were the Student Behavior Checklist (see Appendix C), Peabody Individual Achievement Test (see Appendix D), the Self-Concept Scale (see Appendix E), the modified self-concept scale (see Appendix I), and the Social Skills/Self-Esteem Group Referral Form (see Appendix F). Teacher evaluation pretesting was conducted utilizing the Student Behavior Checklist, equipment checklist (see Appendix G), and a written test on individualized education (see Appendix H).

On-the-Job Training and Coaching.

After 8 weeks, teachers formally began their teaching roles in the classroom. They took responsibility for establishing work contracts and keeping student records on a daily and weekly basis. The "on-the-job" trainer was available for 2 hours per day to observe, coach, and provide needed assistance.

The coaching and transfer techniques recommended by Showers (1984) were utilized. This included classroom practice of theory and new strategies, observation, and feedback. One example of the use of coaching and transfer

techniques took place in a special subject class where the teacher only worked with the children 1/2 hour a day and was having difficulty dealing with the group behavior. The coach spent time observing and discussing different strategies she might try. After using the strategies over a period of time, the coach observed again and provided feedback. Together, they evaluated the strategies used and came up with new strategies. This continued until the teacher felt the problem was resolved and the coach felt that the teacher had successfully mastered the new techniques.

Material Making.

Due to a shortage of time, the material making workshop that had been planned was modified into four sessions incorporated into the weekly staff meetings. In the first two sessions, techniques for designing, organizing, sequencing, and constructing materials were demonstrated, using teacher-made learning materials already in the classroom (see Appendix M). The decision to make a particular learning material was arrived at by two routes. One was to recognize a general need which then became the objective for which a material was designed. The second was to develop an idea from materials that had been found in stores or outside the classroom.

Teachers developed and designed learning materials, using an instructional objective of their own choosing. This work was done on their own time. The writer was available to help with ideas, offer suggestions, demonstrate construction techniques, and provide guidance in the selection of construction material and use of tools.

In the final two sessions, teachers demonstrated the materials they had made to the rest of the staff. This process stimulated ideas and motivated teachers to make additional materials. It was decided that as an ongoing procedure, whenever a new learning material or activity was made, the teacher would demonstrate it to the staff. Not only would teachers be encouraged to make materials, they would then become aware of the new material and familiar with its use for children in the classroom.

On-going Training Sessions.

The pretraining sessions evolved into ongoing training sessions due to the quantity of material covered in the agendas and the amount of time needed to adequately present the material. Flexibility was critical to the success of these training sessions. The writer could not predetermine the specific needs of the staff. These were determined both by the teachers themselves and by the students who were then enrolled in the school. As it turned out, the presence of a

few students deeply affected the content of staff training sessions.

One topic not covered in the agendas that became an ongoing topic of discussion and demonstration was the use of affective activities in the classroom. Since affective activities can be used effectively to modify behavior, various activities were presented and discussed in training sessions, and strategies were developed for their use in the classroom. Their value as an ongoing means of preventing problem behavior, for helping children develop skills in communication and problem solving, for expressing feelings, for relating to peers, etc., was discussed with the staff. The school psychologist demonstrated a variety of activities that could be used, often by having the staff participate in them, before trying them with the children. Teachers reported on their use with the students and their effectiveness. The psychologist was available to coach teachers as well as demonstrate activities with the children for the teachers to observe.

Another topic of extended discussion was the use of logical consequences in the classroom as a means of modifying behavior and managing the classroom. The techniques of Driekurs (1964) from his book Children the Challenge were presented, and teachers were guided in the use of these techniques through peer coaching.

Curriculum Demonstrations.

The need for teachers to become familiar with the curriculum and learning materials already in the classroom was met over an extended period of time. A portion of most staff meetings was set aside for demonstrations and instruction in the use of selected learning materials. Emphasis was placed on particular areas of the curriculum based on the needs expressed by staff members and their familiarity with the materials. In the preschool, the math materials were presented first. Since reading was a major area of need in the primary group, an entire session was spent on the primary reading material.

Posttesting and Reporting.

During the last 4 weeks of the program, teachers conducted posttesting and reporting. The Student Behavior Checklist (see Appendix C) was administered in the classroom to seven children. The teachers administered the Self-Concept Scale (see Appendix E) and the modified form (see Appendix I) to all the children. Due to the amount of time required to administer the Peabody Individual Achievement Test (see Appendix D), one teacher administered that test while a substitute replaced her in the classroom. The Social Skills/Self-Esteem Group Referral Form (see Appendix F) was completed by the same teacher who had completed the pretests.

Teacher evaluations were conducted by using the Direct Instructional Methods Checklist (see Appendix O). Staff members were paired, and they took turns administering the checklist to each other. The results of the Student Behavior Checklist (see Appendix C) were also used as a means of teacher evaluation.

The written test on individualized education was distributed to staff members, and they completed it on their own time. In order to determine whether congruency had increased between teachers' philosophical beliefs and practices, the teachers again completed the Educational Belief System Inventory and the Educational Practices Belief Inventory (see Appendix J). They completed the inventories on their own time.

CHAPTER V

RESULTS, CONCLUSIONS, AND RECOMMENDATIONS

Results

Educators recognize the importance of utilizing educational objectives that fit the needs of individual children. Charles (1976) urged schools to make their curriculums more meaningful and relevant to individual students. Dell (1972) suggested the use of instruments such as placement tests and interest inventories to accomplish the task. This practicum utilized achievement tests as one means of determing the individual needs of children and matching their daily learning activities to those needs.

The first objective of this practicum was for teachers to demonstrate their ability to individualize students' work during a 6-month period by establishing written, individual daily or weekly contracts to meet instructional objectives for two primary grade and two intermediate grade children, as evidenced by the students' completion of their work contracts and mastery of instructional objectives.

The individual work contracts were examined to determine the degree to which the assigned activities matched the children's diagnosed instructional objectives. Specific areas of need for each child were identified from the Peabody Individual Achievement Test. By examining the mistakes in the mathematics subtest, teachers were able to

establish instructional objectives for each child. The spelling and word recognition scores were used to determine if instructional objectives were needed in those areas. An examination of the reading recognition and spelling mistakes revealed instructional needs in the area of phonetics.

The weekly contracts of two primary and two intermediate students were examined and an evaluation of them was performed (see Appendix N). The number of activities that was assigned for each instructional objective was determined. The second Peabody test score was used to determine if the instructional objective was achieved. In math, success was based on the mistakes or correct answers that corresponded with each objective. The total scores in reading and spelling determined the successful achievement of objectives in those areas. The data indicate that the first objective was met.

The second objective was for teachers to function effectively in three individualized classes with 5 kindergarten, 10 primary, and 8 intermediate students over a 3-hour period of observation, utilizing the Direct Instructional Methods Checklist.

Research has revealed the existence of differences in children's learning styles and the need for teachers to utilize a variety of teaching methods in order to match the particular learning style of students (Musgrave, 1975). The Direct Instructional Methods Check List was designed to

measure the degree to which teachers would be able to vary their instructional involvement with students.

The instructional methods used by each participating teacher were observed and marked on the Checklist at the end of each 60 second interval. Over a 3 hour period, this made a total of 180 observations. The number of times that each involvement was observed was tallied and a percentage rate was calculated. For instance, if a teacher was observed tutoring 57 times, that teacher would have spent 32% of the time tutoring. As a criterion for success, no single instructional method used was to exceed 60%, and 8 out of the 17 different involvements were to be observed at least twice. In addition, each teacher was expected to spend at least 60% of the time utilizing instructional rather than noninstructional behaviors.

The results for each teacher are represented on a bar graph (see Appendix O). The number of times each behavior was observed is indicated in Table 1, and a summary is shown in Table 2.

Nearly all of the criteria for success were met by the teachers. None of the teachers used any single instructional method for more that 60% of the observations, the highest percent for any instructional method was 35%, and all teachers utilized 8 out of the 17 different involvements at least twice. Only two of the four teachers, however, spent at least 60% of the time utilizing instructional

Table 1

Direct Instructional Methods Evaluation

	Teachers			
	A	B	C	D
Instructional Methods				
One-to-one instruction	3	35	19	20
Demonstrating learning materials to student	7	3	1	
Demonstrating learning materials to group	5			
Small group instruction (2-3 students)	1		6	
Group instruction/lecture (4 or more)	1	19	1	
Leading discussion	3		15	
Leading affective activity	5			2
Leading whole group activity	4	2		
Giving test to student	1			
Noninstructional Behaviors				
Obsevation	11	4	4	
Record keeping	7	5	2	8
Correcting work		4	12	25
Organizing	20	8		13
Leading students to materials	6	8	5	
Dealing with negative behavior	5	3	4	3
Directing students to work	8		2	17
Encouraging students	11		6	2
Other				
Conversation, nurturing, problem solving, helping students	12			
Interacting				10
Listening, leading children outside		5		
Reading to class			22	

Table 2

Summary of Results

	Teachers			
	A	B	C	D
Number of instructional methods used	9	5	6	2
Percentage of time spent on instructional methods	37%	64%	64%	32%
Percentage of time spent on non-instructional methods	64%	37%	35%	68%
Number of involvements observed at least twice	12	12	12	8
Highest percent of any single instructional method observed	7%	35%	19%	20%

rather than noninstructional behaviors. The writer feels that the reason for this had to do with the group of children and the area of the Learning Center in which the teachers worked. One teacher worked in the practical life area of the preschool. The materials in that area are designed to be utilized with a minimum of teacher instruction and the goal for the children is to work independently. The role of the teacher, therefore, is much more of a resource person and supervisor, as compared to the academic room in which one-to-one instruction is necessary for the use of the materials.

The other teacher worked in the intermediate classroom with a group of eight children. As children progress into the higher grades, the goal of developing independence in learning involvement becomes a priority. In addition, the teachers recognize the need to begin to prepare the older children for the more traditional type of classroom to which they will eventually transfer. Most will transfer to a school with a much higher student-teacher ratio and with considerably less one-to-one assistance available to the students on a daily basis. It becomes increasingly important, therefore, that they learn to function on their own and use one-to-one assistance only when necessary. This weaning process, as reflected in these observations, was even more apparent since the teacher was aware that six of the eight children would be transferring to public school the following school year and felt it important to prepare them for the change.

The third objective was for teachers to demonstrate their ability to provide at least five different methods of instructional and learning methods in their individualized primary and intermediate classrooms over a 3-hour period as measured by the Student Behavior Checklist. To determine each teacher's utilization of different methods of instruction and learning, four primary and three intermediate students were selected at random and observed, using the Student Behavior Checklist. Their behavior was marked at the end of each 2-minute interval. These behaviors were

tallied and a percentage rate was calculated. As a criterion for success, each child was expected to exhibit at least five of the nine learning behaviors, and no single behavior was to exceed 60%. The results indicated that the criteria for success were met. All children exhibited at least five of the nine learning behaviors and the highest percentage for any behavior was 38% (see Tables 3 and 4).

The fourth objective was for teachers to evaluate the progress of 10 primary and 8 eight intermediate students by administering the Student Behavior Checklist, the Peabody

Table 3

Student Behavior Checklist

	Primary Students				Intermediate Students		
Learning Behaviors	A	B	C	D	A	B	C
Reading	x	x	x	x	x	x	x
Writing	x	x	x	x	x	x	x
Reading and writing				x			x
Using learning materials	x	x	x	x	x	x	x
Thinking	x	x	x	x	x	x	x
Helping another student	x	x	x	x			
Receiving help from another student	x		x				
Working with the teacher	x	x	x	x	x	x	x
Participating in group lesson, activity, discussion							
Observing							

Table 4

Percentage of Student Behaviors

	Primary-%				Elementary-%		
	A	B	C	D	A	B	C
Learning Behaviors:							
Reading	13	2	6	15	11	8	6
Writing	26	8	9	13	19	19	26
Reading and writing				11			2
Using learning materials	3	38	19	4	8	23	4
Thinking	3	13	8	4	9	6	11
Helping another student	3	13	2	6			
Receiving help from another student	3	2					
Working with the teacher	26	6	8	7	6	2	1
Participating in group lesson activity, discussion							
Observing							
Nonlearning Behaviors:							
Putting away/getting materials	5		9	7	15	6	26
Getting drink/using washroom, sharpening pencil		2		11	6	2	
Roaming aimlessly							2
Socializing	5	8	8	7	9		6
Daydreaming/gazing		6	9		2	2	4
Observing others	13	4	13	6		6	4
Disturbing others						2	
Other		2	8	9	15	26	4

Individual Achievement Test, the Self-Concept Scale, and the Social Skills/Self Esteem Group Referral Form before and after the program. Due to the extensive amount of time it would have required to administer all of these instruments to all of the students, the writer decided to use the Student Behavior Checklist and Social Skills/Self-Esteem Group Referral Form with a small random sample of students in each group. The other instruments were administered to all of the students, meeting the criterion for success for this objective.

Results from these evaluations provided additional information regarding the effectiveness of the individualized program. One underlying assumption of individualized instruction is that this approach to education will enhance learning and increase learning behaviors. The Student Behavior Checklist was utilized to measure progress in this area.

Four primary and three intermediate students were observed, using the Student Behavior Checklist. The observations were tabulated and a percentage of observations for each behavior was calculated (see Table 5). This was done both before and after the training program. The scores were compared to determine if there had been an increase in learning behaviors over nonlearning behaviors. All four of the primary children showed an increase in learning behaviors and a decrease in nonlearning behaviors ranging from +1% to +24%. The average change was 9%. Two of the three intermediate students showed an increase in learning

Table 5

Student Behavior Checklist Results

	Primary Students - Percentage				
	A	B	C	D	Average
Learning Behavior					
Before	52	75	52	53	58
After	76	79	53	59	67
Change	+24	+ 4	+ 1	+ 6	+ 9
Nonlearning Behavior					
Before	50	23	48	48	42
After	24	21	47	41	33
Change	-26	- 2	- 1	- 7	- 9

	Intermediate Students - Percentage			
	A	B	C	Average
Learning Behavior				
Before	58	50	46	51
After	53	57	56	55
Change	- 5	+ 7	+10	+ 4
Nonlearning Behavior				
Before	42	50	54	49
After	47	43	44	45
Change	+ 5	- 7	-10	- 4

behavior with an average change of 4%. The range was from -5% to +10%. The three intermediate students had all spent 3 to 5 years in traditional classrooms prior to their enrollment at the Learning Center. This was their first experience in an individualized classroom. The writer feels that the smaller amount of change with these three students may have been related to this fact.

Another indication of the effectiveness of individualized education is the degree of academic progress achieved by the students. In order to determine how academically effective this program was, the Peabody Individual Achievement Test was administered to all elementary students before and after the program. At the beginning of the program, there were 18 students in the elementary group. Only 14 completed the test both before and after the program. Two students withdrew during the year; one student was disqualified because he had taken the test during a psychological evaluation 2 months prior to the program; and the fourth student was absent the last 2 weeks of school and could not be located when the final testing was conducted. The test scores are summarized in Appendix P.

The grade placement scores from both tests were compared to determine the degree of change in either a positive or negative direction. The degree of change in each subject area was recorded for each student. Average changes were calculated for each student and for each subject area (see Table 6). An increase of grade

Table 6

Degree of Change on Peabody Individual Achievement Test Scores

Student	Time Lapse Between Tests	Math	Reading Recog- nition	Reading Compre- hension	Spelling	General Info	Total Test	Average
1	.5	+1.1	+ .9*	+2.1	+1.2	+ .5	+1.3*	+1.18*
2	.5	+ .5	+ .4	0	+1.1	+1.2	+ .7	+ .65
3	.5	+ .3	+ .4	+2.0	+ .3	+ .3	+1.1	+ .73
4	.5	+4.7	- .3	+2.0	- .7	+1.5	+1.4	+1.43
5	.5	+ .2	+2.2	+2.1	+ .2	+ .5	+1.1	+1.05
6	.5	+ .7	+ .4	- .4	+2.1	+1.5	+ .8	+ .85
7	.4	+ .7*	+1.1	+1.2	+ .1	0	+ .7*	+ .63*
8	.7	+ .7*	+ .6	+ .3	+ .4			+ .5 *
9	.7	+1.6	-2.1	+3.1*	- .5			+ .53*
10	.7	+4.0	+2.1	+1.4	+4.1			+2.9
11	.6	- .4	+ .8	+4.0	+ .3			+1.18
12	.6	+2.7*	+ .5	+1.0	+1.2			+.75*
13	.7	+3.2	+2.5	+ .6*	+3.3	+1.3	+2.0*	+2.15*
14	.6	0	+1.8	+1.0	+ .4			+ .8
Average	.57	+1.43	+ .81	+1.46	+ .79	+ .85	+1.14	+1.1

Average change per student: 1.1

* This score could have been higher if the tester had not stopped prematurely

equivalency scores equal to the length of time between tests was used as a criterion for success.

Twelve students showed average progress equal to, or greater than, the time lapse between tests. The two students whose average progress was less than the time lapse may have scored higher if the tester had not stopped prematurely. The average degree of change for all students was 1.1 with an average time lapse of .57. Students who scored below their grade level in any subject area on the first test were expected to show an increase of at least .6 on the second test.

Ten scores for individual subjects on the first test were below the students' grade levels. The degree of change for 8 of the 10 scores showed an increase of over .6. Two scores did not meet the criterion. The average degree of change for all 10 scores was 1.1 (see Table 7).

Table 7

Degree of Change for Scores Below Grade Level on First Test

Student Number:	2	3	3	5	5	7	7	7	7	14
Degree of Change:	+1.1	+2.0	+1.1	+2.1	+1.1	+1.7	+1.1	+1.2	+.1	+.4

Average degree of change: 1.1

An individualized educational program must go beyond individualizing the academic curriculum. Instruction must be personalized for the total individual including emotions, feelings, and self-esteem (Charles, 1987). To measure the effectiveness of the writer's practicum in this regard, Self-Concept Scales were administered before and after the program.

The Self-Concept Scale from the Stanford Center for Research and Development in Teaching was administered to the intermediate students. Based on the difficulty some of these students encountered when filling out the inventory, the writer devised a simplified version for the primary students. The changes in scores before and after the program, in either a positive or negative direction, were calculated and recorded on a score sheet.

Upon closer examination of the way in which the intermediate students filled out their questionnaires, it became apparent that three of the students tired of reading each item and just filled out the same answer for the remaining items. In order to determine whether this was the case, the writer administered the questionnaire a second time to each child individually, reading each item and recording the answers. The results of both tests were scored and included in the analysis. The changes in scores for each item on the primary scale were recorded and a total score for the category as well as for each child was calculated. The results are indicated in Table 8.

Table 8

Self-Concept Scale

	Students											
	A	B	C	D	E	F	G	H	I	J	K	*
Good at sports		+1	+1		-1	+1	+1	+1	-1			+3
Learn things quickly				+1			+1	-1	-1			0
Make friends easily with:												
girls	+2					-1			-1		-1	-1
boys	+1	+1					+1					+3
same sex	+2						+1		-1			+2
Get my work done					-1	-1	+1		+1		+1	+1
Able to read well		-1	+1								+1	+1
Remember what I've learned		-1	-1	+1	-1			+1	+1	+1	+1	+2
Will let others have their way sometimes	+2		+1	-1			+1	+1	+2		+1	+7
Know how to do math		-1	-1	+2	+1	+1	+1		+1			+4

Self-Concept Scale (continued)

	Students											
	A	B	C	D	E	F	G	H	I	J	K	*
A good student						+1						+1
Am good looking	-1		-1	+1				+1		-1		-1
Have lots of friends		-1		+1		+1	+1	+2				+4
Spend most time on my work--not goofing off	+2	-1		+1			+1					+3
Enjoy games and sports		+1	+1				+1				-1	+2
Smart	-1		-1		-1		+1	+1	+2	-1	+1	+1
Easy to get along with				+2	-1	-1		-1				-1
Enjoy myself in school					-2		+1	-2				-3
Liked by other kids	-1			+1	-1		+1	+1				+1
Total Change	+6	-2	0	+9	-7	+1	+13	+4	+3	-1	+3	+2

Average change for each student: +2.64

Average change for each question: +1.53

*Total change for each individual student

The average change for each child was +2.64. The range of change for the students was -7 to +13. Two of the 11 children showed change in a negative direction and one student showed no change. The remaining 8 students indicated an improvement in self-concept scores.

The average change for each item was +1.53. The range of scores for the 19 items was -3 to +7. Four items showed change in a negative direction; 1 showed no change; and 14 showed positive change. The item which showed the greatest negative change was "enjoy myself at school." The writer and the school psychologist were concerned about this response which seemed to reflect a negative evaluation of the program. Two of the 11 students showed a negative change on this item. One of the 2 students had had serious difficulty relating to other students throughout his enrollment in the preschool and elementary programs. The writer and school psychologist both felt that this may have been part of the reason for this low score.

The responses were further examined to determine the number of negative and positive scores on each item (see Table 9). These calculations revealed that on 4 of the 19 items, more children indicated negative scores. These four items were the same items that had negative scores shown in Table 8. One of the items, "am good looking," is a personal opinion, not likely to be influenced directly by the educational program, but possibly by the students'

Table 9

Positive and Negative Responses

Question Number	No. of Students Indicating a Positive Change	No. of Students Indicating a Negative Change
1	5	2
2	2	2
3a	7	3
3b	3	0
3c	2	1
4	3	2
5	2	1
6	5	3
7	6	1
8	5	2
9	1	0
10	2	3
11	4	1
12	3	1
13	3	1
14	4	4
15	1	3
16	1	2
17	3	2

peers. One item had to do with relating to girls. Two of the three negative responders were boys. The negative response to the item "easy to get along with" may in fact be an indication of growth in honest self-evaluation. It would be interesting to follow up on this question to see if those students recognize a need to change and wish to become more cooperative and amiable.

The scores for the Self-Concept Scale administered to the intermediate students were calculated and an average change determined for each category. This was completed for both tests--one completed by the students alone and one completed with the teacher (see Appendix Q). The writer was concerned by the responses which indicated a negative change for all students when completed with the teacher and all but one when completed alone. This was unexpected since all observable behavior by both parents and teachers indicated just the opposite. Several of the children made progress academically, socially, and emotionally. The student who showed the greatest negative score was a child who had had a very bad experience in his 3 years in public school. According to his parents, he had been labeled, ostrasized by his peers, and humiliated more than once by his teachers. Although he had difficulty being accepted when he first came to the Center, he made remarkable progress and learned how to relate to others in a positive

way. By the close of the school year, he was relating well and was accepted by all but one of his fellow students.

Another child was a juvenile diabetic. When he first came to the school, he wanted no one to know and was quite secretive about his illness. According to his parents, he had been this way for a long time and seemed to harbor a great deal of anger about his handicap. Gradually, with the help of the school staff and private counseling, he was able to accept his condition. By the end of the year, he talked openly about his diabetes and related experiences. His friends helped monitor him in the classroom, and, after having a mild seizure on a class field trip, he openly discussed it with the group. Everyone involved with the student felt that his self-confidence had greatly increased, although the test results seem to indicate the opposite.

A third student who came to the school with deep emotional problems, mostly the result of early child abuse, was rejected by all of the students when he first arrived. By the end of the school year and after intensive individual work with him, this rejection had turned to acceptance.

In light of these experiences, the writer and school psychologist felt that there might be other reasons for the negative scores on the Self-Concept Scale. One possible reason could have been the length of the test. There was improvement in the scores when the teacher administered the test compared to when it was done alone. In addition, the

concept level and vocabulary of the items may have been too advanced for the group. Another factor may have been related to how it was administered. The students were handed the questionnaire and asked to fill it out. The school psychologist felt that had the children been better prepared for the test, it may have made a difference.

A third possibility may have been the age of the children and their developing self-consciousness. Their self-awareness may have been affected by the small size of the class and the intensity of social relations which tended to be more open and forthright. They often behaved more like siblings than peers, which may have influenced their self-perception in a negative or possibly more honest way.

To measure the effect of the program on the total individual, the Social Skills/Social Self-Esteem Group Form was also administered before and after the program for nine students selected randomly from both the primary and intermediate groups. One teacher filled out the forms for the nine students.

The Referral Form is divided into four sections. The first three sections lend themselves to a numerical score for comparison. The scores before and after the program were compared section by section:

1. Section One: This section measures one to three social behaviors perceived by the teacher as most problematic for the preselected students. The behaviors were

graded in a range from 1--"not severe" to 8--"very severe." Change in behavior was measured by comparing the score from the Social Skills/Self-Esteem Group Referral Form administered before the program to the score of the one administered after the program. The scores moved in either a positive or negative direction.

Example:

Social behavior perceived as most problematic:

(Before) 1. Self-control

How severe is this problem?

1 2 3 4 5 (6) 7 8

Not Severe Very Severe

(After) 1. Self-control

How severe is this problem?

1 2 3 (4) 5 6 7 8

Not Severe Very Severe

Score: +2

The change in behavior was measured for each of the three problematic behaviors graded on the child's Group Referral Form and the scores were totaled. All nine students studied with this form showed change in a positive direction (see Table 10).

Table 10

Results of Children's Group Referral Form

Student	1	2	3	4	5	6	7	8	9	
Change in Scores after Program	+2	+3	+1	+1	+5	+3	+3	+1	+1	Total 20

Average change in score after program: +2.2

2. Section Two: In the second section, teachers chose from a list of 29 specific behaviors on which they felt the preselected students needed to work. Teachers checked the behaviors and circled those which were most important. A score was determined by adding the total number of behaviors checked and assigning one point to each. An additional point was given for each behavior circled. The score for the child after the program was subracted from the score before the program. A decrease in the number of behaviors needing work, indicated by a positive number, signifies a positive change. Four of the nine students showed change in a positive direction (see Table 11). One student showed no change and the remaining four showed a negative change. The average change in either direction was 1.25.

Table 11

Student	1	2	3	4	5	6	7	8	9
Change in Scores after Program	-1	-2	0	-1	+1	+1	-1	+2	+1

3. Section Three: In section three of the Referral Form, the teacher graded each child on 12 specific skills (see Table 12). The grading ranged from a low of 1 to a high of 8. A change was determined by subtracting the grade assigned before the program from the one assigned after the program. A child was awarded a point for each step moved in either a positive or negative direction on each skill. The scores on all 12 skills were totaled to measure the overall change in either a positive or negative direction. Six of the nine students showed change in a positive direction on the total score. The scores for all the children studied ranged from -8 to +7.

The scores listed in Table 12 can be used to determine the program's effectiveness with each of the 12 skills. The program effected the most change in the friendship and social participation and shyness categories. It was least effective in perceiving communication from others and communication with others.

4. Section Four: Section four of the Referral Form lists the teachers' comments and what they indicate to be

Table 12

Change in Behavior Skills Scores

	Students									
	1	2	3	4	5	6	7	8	9	Total
Skills										
Skill in meeting new peers	-1	-1	-1	-1	0	+1	0	+1	-1	- 3
Skill in sustaining relationships with peers	-2	-1	+2	*	-1	0	0	0	+2	0
General mood	-1	0	0	0	+2	0	0	+1	0	+ 2
Self-esteem	0	-2	0	+1	0	+1	0	+1	+1	+ 2
Shyness	+1	0	0	+1	-1	+2	0	0	0	+ 3
Popularity	-1	-1	+1	0	-1	-1	+1	0	0	- 2
Friendship	+2	+1	+3	+3	0	+2	0	+1	+1	+13
Social participation	+1	0	+2	0	+1	0	0	0	0	+4
Anxiety	-1	-1	+1	+2	0	0	+2	-1	-2	0
Perceiving communication from others	-2	-2	-1	0	-2	-1	0	+1	0	-7
Communication with others	0	-1	-2	+1	-2	-1	+1	-1	-1	-6
Work habits (task oriented behavior)	0	0	0	0	-1	0	+1	0	+2	+2
Total	-4	-8	+5	+7	-5	+3	+5	+3	+2	+8

Average change in score per student: +.9
Average change in score per item: +.67
*Question was not answered

the students' strengths before and after the program (see Appendix R). The teachers' comments indicated positive change in all of the nine children. The total of the numerical scores of all three sections shows that improvement was measured in seven of the nine students (see Table 13).

Table 13

Summary of Scores

	Students								
	1	2	3	4	5	6	7	8	9
Part One: Social behaviors perceived as problematic	+2	+3	+1	+1	+5	+3	+3	+1	+1
Part Two: Specific behaviors to work on	-1	-2	0	-1	+1	+1	-1	+2	+1
Part Three: Twelve specific skills	-4	-8	+5	+7	-5	+3	+5	+3	+2
Total	-3	-7	+6	+7	+1	+7	+7	+6	+4

The curriculum of an individualized classroom includes a rich variety of instructional materials selected and developed by teachers (Henry, 1962). Familiarity with the materials and activities available in the classroom is fundamental to the successful functioning of the individualized program.

The fifth objective of this program was to evaluate teachers' knowledge of the classroom materials through the use of a checklist that the teachers completed at the beginning of the program. This list indicated the classroom materials that teachers did not know. At the end of the program, the teachers were asked to correctly demonstrate in a practical examination the use of selected materials which they had indicated on the form as "unfamiliar." The writer evaluated their performance using a score of either "satisfactory" or "needs improvement" (see Table 14).

Seven of the nine scores were satisfactory---a rate of 80%---meeting the criterion for success. The training agendas included demonstrations of class- room materials throughout the program year. Due to the limited amount of time and other needs indicated by staff, not all the materials with which the staff were unfamiliar were demonstrated. The scores indicate that teachers took the initiative to learn on their own about materials that had not been demonstrated.

The sixth objective was for teachers to demonstrate their growth in understanding of individualized instruction

Table 14

Learning Equipment Evaluation

Equipment Evaluated	Satisfactory	Needs Improvement
Teacher A:		
1. blue rectangle box		X
2. fraction skittles	X	
3. digraph picture boards	X	
Teacher B:		
1. knobbed cylinders		X
2. middle vowel tray and pictures	X	
Teacher C:		
1. number puzzles	X	
2. sequin board-teens	X	
Teacher D:		
1. snake game	X	
2. skip counting	X	
3. addition graph	X	
Total	8	2

by showing at least 15% improvement on a written test given at the beginning and end of the training program. The test questions totaled 46 points. The teachers' scores were tallied and a percentage of correct answers were calculated for both tests. The change in scores were computed to determine the degree and direction of change (see Table 15).

Table 15

Examination Scores

	Teacher				
	A	B	C	D	Total
Score Before (%)	78*	91	85	85	
Score After (%)	91	93	91	87	
Total Change	+13	+ 2	+ 6	+ 2	+23

Average total improvement (total change/no. of teachers): 6%

*This teacher did not respond to 10 questions

The criterion for success had been set at an average of 15% improvement on this test. However, with the exception of one teacher who mistakenly left a page of questions unanswered, the scores at the beginning of the program were higher than was expected. An increase of 15% would have required a perfect score on two tests and would not have been possible on a third test. Therefore, the high scores and the improvement of scores accomplished by all four teachers were accepted as the criteria for success.

Research clearly indicates the importance of recognizing individual differences in children in order to

provide for each child's learning style and specific educational needs. It is also important to recognize the individual differences of teachers themselves (Griffin, 1983). Teachers must become aware of themselves--their values, beliefs, philosophies--in order to provide a climate that enhances living and learning (Dobson, 1980). A part of this self-awareness process is for teachers to recognize if there is congruency between their own ideas about education in general and their educational practices.

The seventh objective of this practicum was for teachers to improve their congruency between educational philosophy and educational practice beliefs, as demonstrated by completing the Educational Beliefs Systems Inventory and the Educational Practice Belief Inventory, before and after the training program, and showing scores that increase in proximity to one another.

The Educational Beliefs Systems Inventory, Part I, measures a person's position on seven questions which are:

1. What do you believe about man?
2. What do you believe about motivation?
3. What do you believe about conditions of learning?
4. What are your beliefs concerning social learning?
5. What do you believe about intellectual development?
6. What do you believe about knowledge?
7. What do you believe about society?

The Educational Practice Belief Inventory, Part II, measures a person's position on six questions which are:

1. What do you believe about instruction?
2. What do you believe about curriculum?
3. What do you believe about organization?
4. What do you believe about content?
5. What do you believe about materials and resources?
6. What do you believe about evaluation?

The answers for each of these questions provided three scores--one for each of three philosophical camps labeled A, B, and C. A description of the philosophical positions for each question is given in Appendix L. These scores were totaled and averaged in order to achieve a composite score for each of the three philosophies in Parts I and II. Table 16 gives an example of scores calculated for one teacher before and after the program.

The composite scores from the two tests were then compared to determine if the difference in scores between Parts I and II of the first test had decreased in the second test. A decrease in differences would indicate a greater congruency between teachers' beliefs about educational philosophy and beliefs about educational practice (see Table 17).

Table 16

Summary of One Teacher's Belief Scores

	Questions							
	1	2	3	4	5	6	7	Composite
Before								
Part I:								
Philosophy A	3.6	4	2.6	2.5	3	2	3	2.96
Philosophy B	2.6	1.5	2.5	2.2	3	3	1.5	2.33
Philosophy C	2.4	1.2	1.2	2.7	2	3.5	2	2.14
Part II								
Philosophy A	1.8	3.2	3.2	1.5	3	4.5		2.7
Philosophy B	1.4	1.4	1.4	1	2	1.7		1.48
Philosophy C	1.6	1.8	1.8	2.5	2	2		1.95
After								
Part I:								
Philosophy A	2.8	3	2.6	2	3	2.5	2.5	2.63
Philosophy B	1.6	2	2	2	3	3	2.5	2.3
Philosophy C	2.2	1.2	1.2	2.5	2	3	2	2.01
Part II:								
Philosophy A	1.8	2.6	2.4	2	3	3.75		2.43
Philosophy B	2	1.6	1.6	2	1.5	1.5		1.7
Philosophy C	1.8	2.4	1.4	3	1.5	1.2		1.88

Table 17

Composite of Teachers' Belief Scores

	Teacher A					
	Before			After		
	Part I	Part II	Difference	Part I	Part II	Difference
Philosophy A	2.96	2.87	.09	2.63	2.43	.2
Philosophy B	2.33	1.48	.85	2.3	1.7	.6
Philosophy C	2.14	1.95	.19	2.01	1.88	.73
Total			1.13			1.53
	Teacher B					
Philosophy A	3.13	2.77	.36	2.54	2.27	.27
Philosophy B	2.	1.85	.15	1.67	1.51	.16
Philosophy C	1.96	1.88	.08	2.16	1.83	.33
Total			.59			.76
	Teacher C					
Philosophy A	2.51	2.57	.06	2.76	2.76	0
Philosophy B	1.81	1.45	.36	1.58	1.38	.20
Philosophy C	2.07	1.07	0	1.69	1.78	.09
Total			.42			.29
	Teacher D					
Philosophy A	2.67	2.5	.17	2.75	2.83	.08
Philosophy B	2.2	1.78	.42	2.	1.88	.12
Philosophy C	2.51	2.07	.44	2.21	1.96	.25
Total			1.03			.45

The differences between the composite scores for each teacher at the beginning and end of the program were calculated (see Table 18). A positive difference indicates an increase in congruency between beliefs about educational philosophy and educational practice.

Table 18

Differences in Teachers' Belief Scores

Teacher	Before	After	Change in Congruency
A	1.13	1.53	-.40
B	.59	.76	-.17
C	.42	.29	+.13
C	1.03	.45	+.58

Two of the four teachers showed an increase in congruency. The average change for all four teachers was +.04. These scores do not reflect the significant increase in congruency as a result of the training program needed to meet the criterion for success.

The results of the Educational Beliefs Systems Inventory and the Educational Practice Belief Inventory were further examined to determine the strongest philosophical position of each teacher. The lowest score indicates the strongest philosophical position. These positions were compared to that of the Montessori Learning Center as represented by the administration and its stated educational philosophy. The writer and the school psychologist feel

that the philosophical positions B and C best represent that of the administration and school. The philosophical positions of the teachers at the beginning and end of the program are indicated in Table 19.

Table 19

Philosophical Positions of Teachers

	Philosophical Position (A, B, C)			
	Before		After	
	Part I	Part II	Part I	Part II
Teacher				
A	C	B	C	B
B	C	B	B	B
C	B	B	B	B
D	B	B	B	B

When comparing philosophical positions rather than numerical scores, it is evident that there was congruency between educational philosophy and educational practice for two teachers at the beginning of the program. This congruency increased for a third teacher after the program. There also was strong agreement in philosophy between each of the teachers as well as between the teachers' and the school's philosophy.

Conclusions

The goal of this practicum was to educate teachers to the importance of meeting the individual needs of each child

in a classroom--social, emotional, psychological, and intellectual. The evaluative tools used to measure the effectiveness and success of the program clearly indicate that most of the objectives were met. Teachers successfully individualized the students' work through the use of individual work contracts that met instructional objectives. These weekly contracts were completed by the students and objectives were achieved.

Teachers functioned effectively in the classroom, using a variety of instructional methods and, where appropriate, were spending most of their time utilizing instructional rather than noninstructional behaviors. They successfully evaluated their students' social, emotional, psychological, and academic growth, using the instruments provided. They were able to analyze the findings and utilize the evaluations to develop new objectives and promote further growth.

The teachers' knowledge of the classroom materials improved over the course of the training program. They all took the initiative needed to learn what resources were available and how to use them. Their general knowledge of individualized instruction was adequate at the start of the program, and they all showed improvement in this area as well.

Although the congruency between teachers' philosophies of education and educational practice did not significantly increase as a result of the program, there was a good deal

of congruency to begin with. It was also found that a high degree of agreement in philosophies existed between staff members and with the school itself.

One final measure of effectiveness that is lacking, and would be recommended, is a means of determining that a balance is being maintained between meeting the social and emotional needs of the children as well as the intellectual. Since there is a tendency in today's educational systems to emphasize intellectual needs over and above the social and emotional, it is important to counteract that pressure. The goal of this practicum was for teachers to develop the skills necessary to meet the individual needs of the whole child. The program assured that this was done but a means of guaranteeing its continuance is needed.

Recommendations

The following recommendations will improve upon and facilitate the use of an effective teacher training program for individualized education in preschool, elementary, and intermediate classrooms.

1. Most staff members felt that the Direct Instructional Methods Checklist needed additional categories. They recommended the following: redirecting behavior, listening and/or nurturing, problem solving, interacting, and intervening.

2. When setting a criteria for the use of instructional over noninstructional methods, it is recommended that

the goals of the particular group with which a teacher is working be taken into account. If independence is a goal for a group of children or if materials are designed for independent usage in a particular area of the classroom, then it must be recognized that the teacher will be showing fewer instructional behaviors.

3. When administering the Peabody Individual Achievement Test, it is difficult to tell at a glance when it is time to stop the questioning on a subtest. Teachers will need practice in determining when the number of errors over correct responses indicates the appropriate stopping point.

4. The Peabody Individual Achievement Test is only one instrument which can be used to measure achievement and develop instructional goals. Although it is a comfortable instrument to use with young children, the results fall into rather broad categories. There may be other instruments that would yield more specific findings to use when developing instructional objectives.

5. When presenting a self-concept scale to the students, the administrator should take time to explain what the test is and why it is being used. In some cases, it may be more effective to have a school psychologist, rather than the teachers, administer the instrument. In addition, more than one instrument could be used. It is important that the instruments used be geared to young children.

6. Since the Social Skills/Self-Esteem Group Referral Form is a subjective measurement reflecting teachers' opinions, it is recommended that all teachers who work with the children administer the form. The responses can then be compared and a more objective score can be determined.

7. A periodic follow up is recommended to determine if teachers are maintaining objectives that meet the social and emotional needs of the children.

Dissemination

The results of this practicum will be disseminated in two ways. First, the results will be shared with the staff of the Montessori Learning Center by providing copies of the practicum for them to read and by discussing the results in staff meetings. The teachers who participated in the program will be encouraged to continue utilizing those aspects which they found helpful for their own development. The program will be used to train new teachers who come to the Center. In addition, an ongoing teacher training program will become a part of the weekly staff meetings for all teachers and teacher aides at the Center.

Second, the writer and school psychologist will offer workshops to teachers in the community who seek assistance to individualize their classrooms. This practicum will be shared and used to demonstrate the effectiveness of individualized classrooms for meeting the social, emotional, psychological, and intellectual needs of all children.

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APPENDIX A
The Story of the Montessori Learning Center

The Montessori Learning Center was started with an idea--that school and learning could and should be something that all children enjoy. It was started by Sharon Carlson, an elementary teacher, who had the idea when she began teaching in public school in 1966. Five years later, she realized that the idea could not be carried out in the public school system. As long as goals were set by the adults without regard for the individual capabilities of the children, some children were sure to fail. These children would inevitably come to feel that learning was a chore and going to school, an unhappy experience. No child wants, or tries, to fail; but Sharon saw children essentially being forced to fail by a system that tested, graded, and labeled children's performance without regard for their individual capabilities.

As a remedial reading teacher, Sharon worked with children who had failed and found that as soon as they were allowed to work at their own ability level, their attitude toward learning and themselves immediately began to change and progress was immediate. Because of the children's discontent and frustration, Sharon knew she would never return to the public school system when she left in 1971 to have a baby. Soon after, she became interested in a philosophy and method of education designed by Maria Montessori. She was basically attracted to this approach because of the happiness she saw in the faces of children in every Montessori school she visited. Children were learning--and loving every minute of it.

She discovered that the basic principle of Montessori education is that each child must be allowed to learn what he/she is readily interested in learning as opposed to what curriculum designers, school boards, or teachers decide they should learn. Under this principle, preschool children by their own choosing were not only learning, but were learning more than those students in traditional first-grade classrooms. These preschoolers were learning to read, write, add, subtract, multiply and divide through the use of unique materials designed by Maria Montessori which presented these complicated processes so simply that 3 and 4-year-old children could learn them with relative ease.

After studying the Montessori educational system further, Sharon decided to open a Montessori school in Lancaster. She and her former husband began renovating the first floor of their home at 230 S. Ann St. in April of 1973. On October 1, the Montessori Learning Center was opened with an initial enrollment of 11 preschool children. By the end of that first year, the enrollment had grown to 28; and in January of the following year, Sharon moved out of the upstairs in order to make more room for the steadily growing school.

In August 1975, a new location was obtained at 1693 Oregon Pike. This old house had to be largely renovated and approved for occupancy in time for the fall semester. With the help of parents, these renovations were completed in time and the school opened with 56 preschool students. A first-grade program was incorporated into the preschool and two students enrolled as first graders.

Two years later, in 1977, the school again moved--this time to its current location at 1954 Fruitville Pike. The building was designed according to Sharon's specifications. Additional classrooms enabled the school to begin a separate elementary program. One grade has been added each year and, in 1979, a classroom was rented at the Y.W.C.A. to accommodate the growing elementary program which had 30 students from grades 1 through 7.

The preschool program consists of three classrooms and a large outdoor area. The children come in and move through these rooms and the outdoors, selecting what they wish to do. There are four teachers who operate as a team, covering the space and providing assistance when and where needed. Learning takes place as the children work with the materials in the classrooms. The teachers do not "teach" in the traditional sense but assist each individual child--the materials do the teaching.

The elementary program consists of two classrooms. The Lower Elementary, housed at Fruitville Pike, is for first and some second-grade children. The primary purpose of this program is to establish children in reading. They do not move to Middle Elementary until they have a solid reading foundation. All elementary classes are totally individualized. Children work at their own rate and at their own ability level and there are no grades or labels. Children's performance is measured only by their progress in relation to their capabilities. All concepts are taught through physical, hands-on materials--many of which were designed by Maria Montessori and made by the teacher. Textbooks are supplementary to the materials.

The Middle and Upper Elementary classes are now housed in the building next door to the school on Fruitville Pike. The children are on a contract system, and a computer is used to keep tract of the materials and what each child has accomplished. Each child gets a computer print out, listing all the materials in the classroom, indicating what that child has done on each. From this report, children select what they will do each day. Weekly assignments are also given by the teacher, but the children have flexibility in deciding when to do individual assignments.

Tests are given when the child feels that he/she is ready to take one with the only purpose of a test being to determine if the child knows the materials or is able to do a skill without assistance. If the child does not pass the test, he/she tries again. No stigma is attached to failing and therefore there is little need to cheat. Thus, tests become a vehicle for learning, not a measurement for grading or labeling.

The atmosphere at The Montessori Learning Center is alive with children actively involved with their environment--moving, doing, interacting, and enjoying. Learning is something that is spontaneous and automatic--a natural by-product of a happy and free environment, rich with learning materials.

Sharon Carlson, Directress
Montessori Learning Center
1954 Fruitville Pike
Lancaster, PA 17601

Class_____ Teacher _____ Date_____

Directions: At the end of every 60 seconds check the behavior observed in the space provided. Total the observations and calculate the percentage of times each behavior was observed.

Direct Instructional Methods Checklist		Total	Percent
Instructional Methods:			
One-to-one instruction			
Demonstrating learning materials to student			
Demonstrating learning materials to group			
Small group instruction (2-3 students)			
Group instruction/lecture (4 or more)			
Leading discussion			
Leading affective activity			
Leading whole group activity			
Giving test to student			
Non-instructional Behaviors:			
Observation			
Record keeping			
Correcting work			
Organizing			
Leading students to materials			
Dealing with negative behavior			
Directing students to work			
Encouraging students			
Other			

APPENDIX C

STUDENT BEHAVIOR CHECKLIST

Class _____ Student _____ Date _____

Directions: At the end of every two minutes, check the behavior observed in the space provided. Total the observations and calculate the percentage of times each behavior was observed.

	STUDENT BEHAVIOR CHECKLIST	Total	Percent
LEARNING BEHAVIORS:			
Reading			
Writing			
Reading & writing			
Using learning materials			
Thinking			
Helping another student			
Receiving help from another student			
Working with teacher			
Participating in group activity, lesson, discussion			
Observing			
NON-LEARNING BEHAVIORS:			
Putting away/getting materials			
Getting drink/using washroom/sharpening pencil			
Roaming aimlessly			
Socializing			
Daydreaming/gazing			
Observing others			
Disturbing others			
Other			
COMMENTS:	Total:	_____	

Appendix D

PEABODY INDIVIDUAL ACHIEVEMENT TEST

The Peabody Individual Achievement Test is a standardized achievement test that is untimed and administered individually to students from kindergarten through high school. It contains five subtests: mathematics, reading recognition, reading comprehension, spelling, and general information. It takes approximately 30 to 40 minutes to administer.

The test items are arranged in order of difficulty, which makes it possible to locate quickly and administer only those parts of the test needed for a particular child.

The scoring is completely objective and the subject needs only to point to the responses. More than half of the items are multiple choice.

The test provides grade and age equivalents, pencentile ranks for both grade and age group, and normalized standard score conversions from the percentiles for each of the subtests as well as the total test.

Formal preparation is not a prerequisite for administration of the test (Dunn & Markwardt, 1970).

Appendix E

SELF CONCEPT SCALE *

SELF CONCEPT SCALE

	Excellent	Very good	Better than most	OK	Not so good
1. Being good at sports					
2. Learning things rapidly					
3. Making friends easily with my own sex					
4. Having new, original ideas					
5. Getting my school work done on time and not getting behind					
6. Being able to read well					
7. Being a good size and build for my age					
8. Remembering what I've learned					
9. Being willing for others to have their way sometimes					
10. Solving problems in ways others haven't tried					
11. Being confident, not shy nor timid					
12. Knowing how to do math					
13. Being good at things that require physical skill					
14. Being a good student					
15. Being a leader—one to get things started with my own sex					
16. Thinking up answers to problems—answers no one else has thought of					
17. Being able to concentrate					
18. Being interested in science; learning about things that scientists do					
19. Being attractive, good looking					
20. Having brains for college					
21. Making other people feel at ease					
22. Learning about new things even when other people aren't interested—studying about things on my own					
23. Getting a lot of fun out of life					
24. Writing creative stories and poems					
25. Being a good athlete					

* Charles, C. (1976). Individualizing instruction. St. Louis, MO: C. V. Mosby Company.

Permission for use in this practicum has been obtained

SELF CONCEPT SCALE—cont'd

	Excellent	Very good	Better than most	OK	Not so good
26. Being able to apply what I've learned					
27. Having plenty of friends of my own sex					
28. Seeing new ways of thinking about things and putting ideas together					
29. Spending most of my time on my work, not goofing off					
30. Having good handwriting even when I'm hurried					
31. Being not too skinny, not too fat					
32. Having brains					
33. Being sensitive to what others are feeling					
34. Being able to see things in my mind easily when I want to					
35. Being able to change things when they don't suit me					
36. Being able to spell correctly					
37. Enjoying games and sports					
38. Being smart					
39. Being active in social affairs with my own sex					
40. Being interested in new things; excited about all there is to learn					
41. Well organized; having materials ready when needed					
42. Learning about people around the world and being interested in them					
43. Having nice features (nose, eyes, etc.)					
44. Knowing what to do for the right answer to a problem					
45. Being easy to get along with					
46. Letting my imagination go when I want to					
47. Enjoying myself in school					
48. Doing well in art work, painting or drawing					

Appendix F

SOCIAL SKILLS/SELF-ESTEEM GROUP REFERRAL FORM*

Name of child: _____ Name of person(s) filling out form
Birthdate: _____ _____
Grade: _____ _____
School: _____

Please list, in order of importance, the social behaviors that you perceive as most problematic for this student: (Please be specific and give examples)

1. _____
   How severe is this problem?
   _____
   1 2 3 4 5 6 7 8
   Not severe Very severe

2. _____
   How severe is this problem?
   _____
   1 2 3 4 5 6 7 8
   Not severe Very severe

3. _____
   How severe is this problem?
   _____
   1 2 3 4 5 6 7 8
   Not severe Very severe

Please indicate by checking those other specific behaviors you would like to have this child work on: CIRCLE THOSE WHICH ARE MOST IMPORTANT

____ Participating and joining in
____ Cooperating with others
____ Handling teasing
____ Controlling temper
____ Not hitting or pushing
____ Not clowning or showing off
____ Developing self-control
____ Not teasing or bugging others
____ Telling the truth
____ Not interacting with others; being quiet and withdrawn
____ Not bragging
____ Sitting still
____ Sharing
____ Accepting and liking self
____ Not laughing at other people
____ Other (Please specify)_____

____ Not using offensive language
____ Communicating feelings more openly
____ Compromising with others
____ Listening and paying attention
____ Playing fair (not cheating)
____ Not blaming others
____ Interrupting others
____ Not bossing others
____ Putting self down
____ Learn to keep friends
____ Standing up for self
____ Taking responsibility for self
____ Peer pressure

*White, S. (1985). Social skills & self-esteem development through drama therapy activities. Unpublished manuscript. Permission for use in this practicum has been obtained.

Please circle the appropriate number.

SKILL IN MEETING NEW PEERS (Getting acquainted, making conversation)

1	2	3	4	5	6	7	8
Poor		Fair		Good		Very Good	

SKILL IN SUSTAINING RELATIONSHIP WITH PEERS (Keeping a friendship going, keeping friends over time)

1	2	3	4	5	5	7	8
Poor		Fair		Good		Very Good	

GENERAL MOOD

1	2	3	4	5	6	7	8
Generally unhappy			Average			Generally cheerful	

SELF-ESTEEM

1	2	3	4	5	6	7	8
Poor		Fair		Good		Very Good	

SHYNESS

1	2	3	4	5	6	7	8
Very withdrawn			Average			Very outgoing	

POPULARITY

1	2	3	4	5	6	7	8
Very unpopular			Average			Very popular	

FRIENDSHIPS

1	2	3	4	5
No close friends	One close friend	Two close friends	Three friends	More than 3 friends

SOCIAL PARTICIPATION

1	2	3	4	5	6	7	8
Rarely participates			Average			Participates often	

ANXIETY

1	2	3	4	5	6	7	8
Very anxious			Average			Calm/relaxed	

PERCEIVING COMMUNICATION FROM OTHERS (Body language, facial expressions, vocal tones)

1	2	3	4	5	6	7	8
Poor		Fair		Good		Very Good	

COMMUNICATION WITH OTHERS (Expressing feelings, eye contact, speaking up, standing up for rights)

1	2	3	4	5	6	7	8
Poor		Fair		Good		Very Good	

WORK HABITS/TASK-ORIENTED BEHAVIOR

1	2	3	4	5	6	7	8
Poor		Fair		Good		Very Good	

PLEASE WRITE DOWN CHILD'S STRENGTHS :

COMMENTS OR OBSERVATIONS :

Adapted from Eugene S Urbain, PHD

APPENDIX G :

Learning Equipment Checklist (Elementary)

Mark: F (familiar N (need training) U (unfamiliar)

Mathematics

	F	N	U
Golden Beads			
Addition Strip Board			
Stamp Game			
Addition Graph			
Addition Charts			
Snake Game (positive)			
Dot Game			
Small Bead Frame			
Large Bead Frame			
Subtraction Strip Board			
Subtraction Graph			
Subtraction Charts			
Snake Game (negative)			
Multiplication Board			
Colored Beads			
Pythagoras Board			
Multiplication Graph			
Multiplication Charts			
Multiplication Flash Cards			
Math Circles			
Multiplay			
Multiples Pegboard			
Flat Bead Frame			
Checkerboard			
Bead Chains (square & cube)			
Division Boards			
Division Graph			
Division Charts			
Test Tube Division			
What is the Sign			
Number Reading			
Clock Match			
Roman Numerals Match			
Days & Months Match			
Calendar Chart			
Calendar Book			

	F	N	U
Money Tray Match			
Money Vocabulary Match			
Money Cards (red) I, II			
Money Cards (blue) I, II			
Money Cards III			
Money Count			
Money Notebook			
Fractions Insets:			
Introduction			
Reduction			
Expansion			
Addition & Subtraction			
Multiplication			
Division			
Decimal Layout			
Geometric Puzzles			
Detective Triangle			
Geometric Solid Match			
Geometric Insets			
Types of Lines Match			
Types of Circles Match			
Parts of a Triangle Match			
Triangle Box			
Rectangle Box			
Types of an Angle Match			
Measuring Angles Inset			
Geometric Cabinet			
Triangle Tray Match			
Polygon Tray Match			
Curved Shapes Tray Match			
Quadrilaterial Tray Match			
Equal, Greater, Less			
Balance Scale			
Mathematics Definitions			

Language	F	N	U
Object-Word Match			
Picture-Word Match			
[illegible]ence-Picture Match			
Moveable Alphabet			
Phonics Boxes (a, e, i, o, u, oo, ow, digraphs)			
Cursive Sheets			
Typing Sheets			
Individualized Spelling Cards			
Reading Flashcards			
Braile Match			
Braile Sentence Strips			
Morse Code Match			
Nouns are the Name Of Board			
Noun-Verb Chart			
Classification Board			
Readó (blue, red, green)			
Syllabo			
Understanding Words Board			
Contraction Board			
[illegible]osite Match			
Homonyms A, B,			
Homonym Match 1 & 2			
Homonym Sentences 1-4			
Synonym Sentences 1 & 2			
Antonym Match 1 & 2			
Antonym Sentences 1-3			
Alphabetical Order Boxes			
Alphabetical Order Board			
Alphabetical Order Puzzle Boards			
Abbreviation Match			
Grammar Boxes			
Preposition Command			
Preposition Match			
Structural Analysis Box			
Punctuation Box			

History	N	U
Land & Water Forms Match		
Puzzle Maps		
Pin Maps		
Cabinet Pin Maps		
Parts of the Flag Match		
Europe Flag Match		
World Maps (gulfs, bays, lakes, capes, straits, seas)		
Capital Cities Match		
United States Shape Match		
U. S. Abbreviations Match		
Continent Questions		
North America Flag Descriptions		
Europe Flag Descriptions Match		
Match Two - Flags		
Boats Match & Timeline		
Parts of a Sailing Vessel		
Knots Sets 1-3		
U.S. History Time Line		
Discovery of the New World Box		
Exploring the New World Box		
Settling the New World Box		
16th Century Europe Box		
Explorers Box		
Jamestown Box		
Explorers Match		
19th Century Tools		
Tool Match		
Roman Art (1st-3rd Century)		
Michelangelo Match		
Renoir Match		
Musicians & Their Instruments		
Henri Daumier Match		
Hans Hemling Match		

Science

	F	N	U
Parts of the Fish Box			
Parts of the Amphibians Box			
Parts of the Reptiles Box			
Parts of the Birds Box			
Parts of the Mammals Box			
Vertebrate Grand Layout			
Fish Picture Match			
Reptile Picture Match			
Bird Picture Match			
Birds Around the World			
Bird Picture Match II			
Bird Picture Definition Match			
Mammal Picture Definition Match			
Dinosaur Match I & II			
Mollusk Match			
Animal Match 1 & 2			
Wildlife of North America			
Vertebrate Sort			
Animal Stories			
Which is Which?			
Mammal Orders Sort			
Intermal Parts of Vertebrate			
Parts of the Cell Box			
Parts of the Protozoa Box			
Parts of the Porifera Box			
Parts of the Coelenterata Box			
Parts of the Annelida Box			
Protozoa-Porifera Match & Sort			
Coelenterata Picture Match			
Annelida Picture Match			
Charlotte's Web			
Animal Kingdom Bingo			

Human Boxes:

Muscle			
Parts of the Bone			
Lower Skeleton			
Upper Skeleton			
Bones of the Body			
Joints			
Vertebral Column			

	F	N	U
Parts of the Vertebrate			
Bones of the Hand & Foot			
Real Bone Match			
Parts of the Blood			
Heart			
Circulation of the Blood			
Circulatory System			
Blood Vessel Definitions			
Respiratory System			
Parts of the Brain			
Neuron			
Human Body Worksheets			

Parts of the Plant			
Parts of the Root			
Parts of the Leaf			
Parts of the Flower			
Wild Flower Match			
Leaf Cabinet			

Learning Equipment Checklist (preschool)

Mark: F (familiar) N (need training) U (unfamiliar)

Mathematics

	F	N	U
Number Rods			
Sandpaper Numerals			
Number Rods & Numerals			
Small Number Rods & Tiles			
Spindle Box			
Cards & Counters			
Math Workbook I			
Supplemental Material:			
Cupcake Trays			
Unifix Plates			
Number Puzzles			
Egg Carton			
Pegs & Numerals			
Feet & Numerals			
Golden Bead - Intro. Tray			
Golden Bead - 9 Tray			
Golden Bead Layout			
Addition Materials:			
Number Rods			
Small Table Rods & Tiles			
Unifix Cubes			
Assc. with symbols (+,=)			
Colored Bead Stair			
Addition Strip Board			
Problem Worksheets			
Bank Game			
Seguin Board - Teen			
Seguin Board - Ten			
Hundred Chain			
Hundred Board			
Thousand Chain			
Snake Game			
Subtraction Materials:			
Number Rods			
Unifix Cubes			
Assc. with sumbols (-,=)			
Colored Bead Stair			
Sub. Strip Bd.			
Bank Game			
Problems			
Multiplication Materials:			
Multiplication Bd.			
Colored Bead Stair			
Skip Counting Chains			
Assc. with symbol (x,=)			
Bank Game			
Problems			
Division Materials:			
Division Bd.			
Assc. with symbol (,=)			
Bank Game			
Problems			
Math Charts (+,-,x,)			
Fraction Skittles			
Clock - introduction			
Clock Pictures & Labels			

Geometry

	F	N	U
Geometric Cabinet			
Constructive Triangles:			
Triangle Box			
Sm. Hexagon Box			
Lg. Hexagon Box			
Rectangle Box			
Blue Triangles			
Binomial Cube			
Trinomial Cube			
Geometric Extensions:			
Tracing Shapes			
Pin Punching Shapes			
Booklets			

Geography

	F	N	U
Puzzle Maps - World, U.S., N.A.			
Maps - Pin Punching & Tracing			
Flag Match			
Land & Water Forms			

Learning Equipment Checklist

Reading	F	N	U
Metal Insets			
Sandpaper Letters			
Object Box			
Beg. Consonant Picture Envelopes			
Picture Boards			
Reading Workbook (Beg. Cons)			
Middle Vowel Tray & Pictures			
Vowel Picture Envelopes			
Vowel & Picture Match			
Short Vowel Booklets			
Moveable Alphabet			
Picture Word Match			
Blending words			
Reading Workbook 1 (red)			
Mac Tab Series Books A			
Silent E Cards & Box			
Long Vowel Match			
Reading Workbook 2 (blue)			
Mac & Tab Series Books B			
Digraph Picture Match			
Digraph Picture Boards			
eading Workbook 3 (green)			
Mac & Tab Series Books C			
Phonograms			
Digraphs			
Reading Books:			
Stories from Sounds Series			
Mac & Tab Series A,B,C			
Mac & Tab Supplemental Series A,B,C			
Harcourt, Brace, Jovanovich Preprimers			
Primer			
First Reader			

Sensorial	F	N	U
Knobbed Cylinders			
Pink Tower			
Broad Stairs			
Long Rods			
Tower, Stairs, Rods Comb.			
Knobless Cylinders			
Knobless & Knobbed Cylinders Combined			
Color Box I			
Color Box II			
Color Box III			
Rough & Smooth Boards			
Fabric Match			
Geometric Solids			
Baric Tablets			
Sound Shakers			
Fruit Match			
Vegetable Match			

Botany & Zoology			
Animal Matching Cards			
Classification of Animals			
Animal Sequence Puzzles			
Animal-Object/Picture Match			
Leaf Cabinet			
Parts of a Leaf			
Parts of a Flower			
Parts of a Tree			
Parts of a Root			
Organic/Inorganic Sort			
Parts of a Fish			
Parts of an Amphibian			
Parts of a Reptile			
Parts of a Bird			
Parts of an Insect			
Parts of the Body			

Appendix H

EXAMINATION

Check the correct response(s) to each of the following statements.

1. The components of individualized instruction may be divided into which two major parts:

   a. curriculum materials and classroom involvement
   b. teacher involvement and student involvement
   c. student involvement and curriculum materials
   d. teacher involvement and administrator involvement

2. The teacher's roles in an individualized classroom are

   a. tutoring, testing, record keeping
   b. tutoring, curriculum counseling, record keeping, and testing
   c. classroom management, curriculum counseling, tutoring, and modifying student behavior

3. Student responsibility in the individualized classroom

   a. emphasizes his responsibility to the teacher
   b. includes only his responsibility to himself
   c. relates primarily to his responsibility for achieving objectives
   d. includes responsibilities for others as well as for himself

4. Independent learning is a term that

   a. describes what the student in an individualized classroom does
   b. means the same as an individualized classroom
   c. is not feasible in an individualized classroom
   d. refers to curricular materials

5. The statement that best supports the use of individualized instruction:

   a. individualized instruction is always successful
   b. students are asking to be considered as individuals
   c. it is easy for teachers to individualize their instruction
   d. students always want to be in an individualized classroom

6. Particular learning activities are selected because they

   a. include many learning materials
   b. provide a variety of ways to achieve the objectives
   c. are what is available in the school
   d. provide an opportunity for the teacher to correct

work during class

7. In an individualized classroom, evaluation is

a. testing for each objective
b. never done by means of paper and pencil tests
c. done for several purposes such as measuring students for their rank in class or for their achievement of objectives, for giving a grade, and for passing to another grade level
d. done for several purposes such as checking progress on activities or on objectives, for placement in a sequence of objectives, and as a survey of continuing achievement of objectives

8. A teacher in an individualized classroom uses behavior-modification techniques to help

a. students become self-managed learners
b. students learn the rules of the classroom and the school
c. students keep the room quiet for others
d. teachers keep an orderly classroom

9. Student activity lists are usually

a. created by the students
b. written during a student conference
c. prewritten and assigned uniquely for each student
d. prewritten and handed to the students

10. Arrangement of instructional materials in an individualized classroom is usually organized

a. to meet goals related to esthetic appreciation
b. in alphabetical arrangement by author
c. by a numbered and color-coded system
d. to meet the needs of easy retrieval

11. Room arrangement in an individualized classroom is

a. based on the need for provision for a variety of types of activities
b. much like the room arrangement in group-centered classrooms
c. based on the need of the teacher to observe all students
d. based on the need to leave working space in the center of the room

12. Which five of the objectives listed below include requirement for observable behavior:

a. the student will appreciate modern art
b. the student will understand how to test an hypothesis
c. the student will write or tell a summary of information he has gathered from several sources
d. the student will be interested in scientific experimentation

e. the student will be able to classify literature into one of these types of prose: novel, short story, drama, biography, autobiography, essay
f. the student will write equations for solving written problems
g. the student will enjoy good literature
h. the student will take part in community-action programs
i. given a list of historical events, the student will be able to select those that relate by reason of cause and effect
j. given a list of prejudicial statements, the student will understand which are a result of class conflict

13. Activities for achieving objective

a. should always be listed as required activities
b. can vary as required or suggested activities
c. are never stated before a student begins work on the achievement of the objective

14. Learning guides (contracts) should be developed

a. in only one format that has been proven to be effective
b. so there is a different format for each grade level
c. in one or two basic formats agreed upon by a school system

15. Student characteristics that should be considered in writing activities include which four of the following:

a. the ability to learn from abstract material
b. reading ability
c. sex of the student
d. the student's past grades
e. a need for teacher support
f. ethnic-group membership
g. preference for working with others

16. Suggested activities should always include

a. a great deal of reading so the students' reading ability will be increased
b. alternatives to reading for students with low reading ability or interest
c. at least one audio-visual activity in each sequence

17. Most students in an individualized classroom should use

a. prewritten teacher-organized learning guides
b. learning guides they have written for themselves
c. a learning guide written for their group in the class
d. will not need a learning guide to achieve objectives

18. Wide difference in rate of learning is due to

a. the energy level of a student and his ambition

b. competencies included in a student's learning behavior, levels of general intelligence, and the rewards he thinks he will receive for achieving
c. a student's general ability, his past learning history, and his present ambition
d. a student's general ability

19. If a student has not learned to read, a teacher should recommend that

a. he be sent back one grade
b. he try a new approach to reading
c. he try the same activities again
d. he do all of his acitivites with materials that do not require reading
e. he resign himself to not reading

20. The underlying rule that should be used in conducting a periodic curriculum-counseling session is:

a. the teacher should help the student take the lead in making judgments about his progress
b. the teacher should use the session as an opportunity to judge the student's progress in relation to his peers
c. a student can always do better, so the teacher should seek to spur him on to more progress
d. a student is not capable of assessing his own progress, so the teacher can seize this opportunity to point out how he is doing

21. Four reasons why a student may not be completing his goal for achieving objectives are

a. inappropriate entering behaviors
b. inappropriate activities or materials
c. lack of classroom structure
d. misjudgment of student's ability to complete assigned activities
e. laziness of student
f. nonlearning behaviors

22. The curriculum counseling session is conducted for the purpose of

a. helping a student keep track of his progress
b. keeping a periodic check on student progress
c. helping a student learn the skills of planning, setting goals, and assessing his own progress
d. helping the teacher plan activities for students

23. The two statements you think would be the most reinforcing to a student are:

a. That's great, Robin. You were very accurate in these division problems.
b. Fine, Bill. Good work.

c. Kim, you have completed three activities on this objective since yesterday. You must really have been working.
d. Good boy, Roger!

24. The three steps that should always be included in a tutoring session are:

a. tell a student where he has made a mistake
b. ask the student to tell you what he thinks the problem is
c. use the concept or skill in a concrete example or in illustrative experiences familiar to the student
d. tell a student to figure out the problem with the help of the text
e. explain the problem and then send him to his desk to work
f. ask a student to demonstrate his proficiency in the skill or concept

25. The best way to assess a student's understanding of the skill or concept at the end of a tutoring session is to

a. ask him if he understands
b. ask him to demonstrate the skill or use the concept in a new context
c. watch him as he works in subsequent activities
d. wait to see if he achieves the objective when he takes the objective test

26. Teachers in an individualized classroom will have continuous interaction

a. only with students who need tutoring
b. with every student for curriculum counseling, but no further contact with able students
c. with every student for curriculum counseling, interaction with some for tutoring, and interaction with all students for reinforcement
d. on a much smaller scale than in a group-centered classroom

27. To insure that students have enough tutoring to fulfill their needs the teacher should

a. periodically have a whole class tutoring session
b. do nothing but tutoring in the classroom
c. devise several procedures to take care of tutoring needs
d. assume that students will not need to be tutored in an individualized classroom with self-tutoring materials

28. If a teacher wants to evaluate his tutoring skills he should

a. learn what the necessary skills are and listen to himself as he tutors
b. ask students how he can improve

c. memorize the list of skills necessary for effective tutoring
d. check the progress of all of his students

29. A schedule for teacher tutoring time should include

a. time for tutoring only those who are most deficient in the skills
b. time for only those who will learn quickly
c. time for large group tutoring
d. time for scheduling tutoring sessions and for taking care of spontaneous needs

30. The most efficient and effective class schedule for individualized classes at all levels is

a. large blocks of time
b. short blocks of time, each one designated for a separate subject
c. a large group lecture followed by work sessions
d. scheduled times for tests, study, discussion groups, use of learning equipment

31. the six behaviors which are inappropriate and would need to be modified include:

a. failing to achieve an objective
b. failing to return materials to the proper shelves
c. consistently hitting other students when moving about the classroom
d. daydreaming constantly and therefore not meeting the goals for a work schedule
e. working on an objective that the other students have previously achieved
f. consistently talking to other students
g. remaining silent in a discussion group unless asked to respond
h. organizing work at the beginning of the period more slowly than necessary
i. talking occasionally while getting started on activities

APPENDIX H

Examination Answers

1. a or c	11. a	21. a, b, d, f
2. c	12. c, e, f, h, i	22. c
3. d	13. b	23. a, c
4. a	14. c	24. b
5. b	15. a, b, e, g	25. c
6. b	16. b	26. c
7. d	17. a, d (preschool)	27. a or d
8. a	18. c	28. d
9. c	19. b	29. a
10. d	20. a	30. b, c, d, f, g, h

Total points: 46

Appendix I

MODIFIED SELF CONCEPT SCALE

	Very Good	O.K.	Not so Good
1. Good at sports			
2. Learn things quickly			
3. Make friends easily with:			
girls			
boys			
same sex			
4. Get my work done			
5. Able to read well			
6. Remember what I've learned			
7. Will let others have their way sometimes			
8. Know how to do math			
9. A good student			
10. Am good looking			
11. Have lots of friends			
12. Spend most time on my work--not goofing off			
13. Enjoy games and sports			
14. Smart			
15. Easy to get along with			
16. Enjoy myself in school			
17. Liked by other kids			

Appendix J

Educational Beliefs Systems Inventory
Educational Practice Belief Inventory

Score Sheet

Record the score (1 - 5) on the blank beside each item indicated.

Compute the sum for each set of items in each category.

Divide the sum by the number of statements. For example, category I "What do you believe about Man" has 15 statements, 5 each for each of the three camps (A,B,C). So each set of 3 scores in this category would be divided by 5 to produce 3 composite scores.

The scores indicate the degree of agreement or disagreement with each of the three camps relative to the particular category. The lower the score, the greater the agreement.

Educational Beliefs System Inventory

I. What do you believe about man? (Items 1-15)

A. (1)____(4)____(8)____(9)____(13)____ Total = _____ ÷ 5 = _____ A

B. (2)____(5)____(6)____(12)____(14)____ Total = _____ ÷ 5 = _____ B

C. (3)____(7)____(10)____(11)____(15)____ Total = _____ ÷ 5 = _____ C

II. What do you believe about motivation? (Items 16-27)

A. (16)____(17)____(23)____(24)____ Total = _____ ÷ 4 = _____ A

B. (18)____(21)____(22)____(27)____ Total = _____ ÷ 4 = _____ B

C. (19)____(20)____(25)____(26)____ Total = _____ ÷ 4 = _____ C

III. What do you believe about the conditions of learning? (Items 28-39)

A. (28)____(33)____(34)____(36)____ Total = _____ ÷ 4 = _____ A

B. (30)____(31)____(35)____(38)____ Total = _____ ÷ 4 = _____ B

C. (29)____(32)____(37)____(39)____ Total = _____ ÷ 4 = _____ C

IV. What are your beliefs concerning social learning? (Items 40-51)

A. (41)____(44)____(49)____(51)____ Total = _____ ÷ 4 = _____ A

B. (40)____(43)____(45)____(46)____ Total = _____ ÷ 4 = _____ B

C. (42)____(47)____(48)____(50)____ Total = _____ ÷ 4 = _____ C

V. What do you believe about intellectual development? (Items 52-57)

A. (52)____(53)____ Total = _____ ÷ 2 = _____ A

B. (54)____(56)____ Total = _____ ÷ 2 = _____ B

C. (55)____(57)____ Total = _____ ÷ 2 = _____ C

VI. What do you believe about knowledge? (Items 58-63)

A. (59)____(63)____ Total = _____ ÷ 2 = _____ A

B. (60)____(61)____ Total = _____ ÷ 2 = _____ B

C. (58)____(62)____ Total = _____ ÷ 2 = _____ C

VII. What do you believe about society? (Items 64-69)

A. (65)____(66)____ Total = _____ ÷ 2 = _____ A

B. (64)____(67)____ Total = _____ ÷ 2 = _____ B

C. (68)____(69)____ Total = _____ ÷ 2 = _____ C

Composite Scores Part I

A. (I)_____ (II)_____ (III)_____ (IV)_____ (V)_____(VI) _____ (VII) _____

Total score _____ ⁄ 7 = _____ Composite score for A

B. (I)_____ (II)_____ (III)_____ (IV)_____ (V)_____(VI) _____ (VII) _____

Total score _____ ⁄ 7 = _____ Composite score for B

C. (I)_____ (II)_____ (III)_____ (IV)_____ (V)_____(VI) _____ (VII) _____

Total score _____ ⁄ 7 = _____ Composite score for C

Educational Practice Belief Inventory

I. What do you believe about instruction? (Items 70-84)

A. (70)____(75)____(76)____(79)____(84)____ Total = _____ ⁄ 5 = _____ A

B. (71)____(74)____(78)____(80)____(83)____ Total = _____ ⁄ 5 = _____ B

C. (72)____(73)____(77)____(81)____(82)____ Total = _____ ⁄ 5 = _____ C

II. What do you believe about curriculum? (Items 85-99)

A. (85)____(86)____(90)____(93)____(94)____ Total = _____ ⁄ 5 = _____ A

B. (88)____(89)____(91)____(97)____(99)____ Total = _____ ⁄ 5 = _____ B

C. (87)____(92)____(95)____(96)____(98)____ Total = _____ ⁄ 5 = _____ C

III. What do you believe about organization? (Items 100-114)

A. (100)____(101)____(107)____(108)____(109)____ Total = ____ ⁄ 5 = ____A

B. (103)____(104)____(105)____(106)____(111)____ Total = ____ ⁄ 5 = ____B

C. (102)____(110)____(112)____(113)____(114)____ Total = ____ ⁄ 5 = ____C

IV. What do you believe about content? (Items 115-120)

A. (115)____(116)____ Total = _____ ⁄ 2 = _____ A

B. (118)____(120)____ Total = _____ ⁄ 2 = _____ B

C. (117)____(119)____ Total = _____ ⁄ 2 = _____ C

V. What do you believe about materials and resources? (Items 121-126)

A. (123)____(126)____ Total = _____ ⁄ 2 = _____ A

B. (121)____(122)____ Total = _____ ⁄ 2 = _____ B

C. (124)____(125)____ Total = _____ ⁄ 2 = _____ C

VI. What do you believe about evaluation? (Items 127-138)

A. (130)____(134)____(137)____(138)____ Total = _____ ⁄ 4 = _____ A

B. (127)____(128)____(131)____(133)____ Total = _____ ⁄ 4 = _____ B

C. (129)____(132)____(135)____(136)____ Total = _____ ⁄ 4 = _____ C

Composite Scores Part II

A. (I)_____ (II)_____ (III)_____ (IV)_____ (V)_____ (VI)_____

Total score _____ ÷ 6 = _____ Composite score for A

B. (I)_____ (II)_____ (III)_____ (IV)_____ (V)_____ (VI)_____

Total score _____ ÷ 6 = _____ Composite score for B

C. (I)_____ (II)_____ (III)_____ (IV)_____ (V)_____ (VI)_____

Total score _____ ÷ 6 = _____ Composite score for C

Summary of Scores

Part I

Questions:	I	II	III	IV	V	VI	VII	Composite
Philosophy A	___	___	___	___	___	___	___	_____
Philosophy B	___	___	___	___	___	___	___	_____
Philosophy C	___	___	___	___	___	___	___	_____

Part II

Questions:	I	II	III	IV	V	VI	Composite
Philosophy A	___	___	___	___	___	___	_____
Philosophy B	___	___	___	___	___	___	_____
Philosophy C	___	___	___	___	___	___	_____

	Before			After		
Composite Score:	Part I	Part II	Total	Part I	Part II	Total
Philosophy A	_____	_____	_____	_____	_____	_____
Philosophy B	_____	_____	_____	_____	_____	_____
Philosophy C	_____	_____	_____	_____	_____	_____

Appendix K

PRELIMINARY TRAINING SESSION AGENDAS

Session 1: Becoming familiar with ourselves and each other

Conduct self-awareness activities

Administer Educational Beliefs System Inventory

Administer Educational Practice Belief Inventory

Score, analyze, and discuss results

Presentation on individualized education

Discuss journal articles on individualized education

Session 2: Setting terminal goals and specific instructional objectives

Define and discuss terminal and instructional objectives

Other discussion topics:

1. How to recognize statements that require observable behavior
2. Writing objectives so that achievements are observable and measurable
3. Making objectives educationally meaningful

Complete written exercises on these topics

Session 3: Identifying the needs of children and matching objectives to those needs

Demonstrate teacher-made tests:

1. placement tests
2. interest inventories
3. self-check tests
4. objective tests
5. survey tests

Demonstrate commercial and standardized tests:

1. achievement tests (Metropolitan Achievement Test, Iowa Test of Basic Skills, Peabody Individual Achievement Test)
2. reading inventories
3. commercial tests (Key Math)

Use sample test results to practice developing instructional objectives based on the needs identified in the test

Practice designing tests

Session 4: Designing and setting up learning activity contracts

Examine basic ingredients:

1. objectives
2. list of activities
3. evaluation

Discuss matching instructional objectives to students

Discuss evaluation procedures

Discuss various formats:

1. pocket type
2. daily/weekly assignment type
3. two or three-option type
4. materials-activities columns
5. preschool format
6. student-controlled type

Discuss matching activities to learning styles

Introduce use of learning style inventories

Design informal learning style and interest inventories

Session 5: Developing evaluation instruments to measure student achievement

Introduce evaluation measurements:

Formal:

1. Student Behavior Checklist
2. Peabody Individual Achievement Test
3. Self-Concept Scale
4. Social Skills/Self-Esteem Group Referral Form

Informal:

1. anecdotal records
2. informal checklists
3. activity charts
4. periodic evaluations

Practice administering evaluations

Discuss using evaluations to build self-esteem

1. Designing and using evaluations in ways that build and encourage
2. How evaluations can damage self-esteem
3. What to avoid when using evaluation instruments

Session 6: Exploring the classroom roles of the teacher

Classroom manager:

Setting ground rules:

1. selecting objectives
2. getting and returning materials

3. finding a place to work
4. working with teacher
5. working with other students

Maintaining proper atmosphere:

1. relaxed atmosphere of acceptance
2. noise level conducive to study
3. prevent interference of others

Classroom organization:

1. facilities for storage
2. organization of materials
3. materials retrieval system
4. study areas

Curriculum counseling and tutoring:

1. counseling students on learning activity choices
2. helping students set goals for work schedule
3. assisting students when difficulties are encountered
4. helping children use a variety of resources for help
5. adjusting activity schedules to match students' abilities
6. encouraging students
7. helping children to help themselves

Behavior modification:

1. identifying problem behavior and possible causes
2. developing strategies for changing behaviors
3. implementing strategies
4. evaluating and reinforcing behavior
5. finding alternative strategies

Session 7: Developing effective and efficient record keeping systems

Discuss importance of record keeping for:

1. keeping track of work
2. evaluating progress
3. determining future activities
4. reporting to parents

Discuss design of record keeping system for efficiency and simplicity

Discuss need for record keeping system to provide information on:

1. curricula data
2. individual student progress reports
3. individual work contracts
4. developing parent reports

Present example of record keeping systems

Select and design record keeping system to use in the classroom

Session 8: Evaluating teacher performance

Discuss evaluation instruments

1. introduce Direct Instructional Methods Checklist
2. review Student Behavior Checklist and how it will be used to evaluate teachers
3. administer tests
4. equipment checklist
5. written test on individualized education

Discuss self-evaluation techniques

Design self-evaluation instruments

Establish rationale and assign peer coaching teams

Appendix L

Philosophies Measured by the Educational Beliefs System Inventory and Educational Practice Belief Inventory

PART I

I. What do you believe about man?

A1 Man's potential tends toward evil. Therefore, for the good of society and themselves, children must be directed and controlled. These persons attempt to shape learners according to their values and teach them what they should know.

B1 A neutral belief of man is expressed. These persons begin with children where they are perceived to be functioning and manipulate the environment so that the children have the best possible experience based on the adult's judgment of what is best. Human potential is seen as a goal to be realized. The total person is one who is in harmony with the external environment.

C1 Man is inherently inclined toward goodness. Man is cooperative and constantly seeking experiences that enhance his/her unique self. Individual perceptions are the only reality known to man.

II. What do you believe about motivation?

A2 Motivation is interpreted as the process of initiating, sustaining and directing the activities of the organism. Appropriate external stimulation, usually in the form of rewards is necessary for optimal achievement.

B2 Focuses on a blend of the teacher as manipulator and the intellectual structures that characterize what is to be taught.

C2 Focuses on the person as the initiator of their own learning tasks. The most desirable rewards are internal in nature and are a reflection of self satisfaction.

III. What do you believe about conditions of learning?

A3 Focuses on training the separate faculties of the mind. Learning is largely a reactive experience, therefore learning situations should be created to induce competition for rewards among learners.

B3 Focuses on a combination of self confidence, physiological, social, and intellectual development in determining learner expectations. Also concerned with whether or not learning tasks are life-like or functional. Concerned with the learner working up to his/her ability.

C3 Recognizes that the learner is perceptually closer to the learning situation than are teachers; subsequently, they see and feel what is needed and are capable of self-direction. Experiencing, being, and learning are seen as a totality that can be dichotomized only after the fact. Learning emerges in the flow and continuity of man's total experiencing and growing. There cannot be stated outcomes of learning.

IV. What are your beliefs about social learning?

A4 Social learning is seen as the gradual acquisition of attitudes and behavior that enable the individual to function as a member of society. Emphasis is on the development of behavior patterns which are acceptable to society.

B4 Focuses on how the individual functions relative to group norms. Satisfaction in learning is affected by the group atmosphere as well as the products.

C4 Accepts that man can create his/her own environment. Sees the person as central to their own idiosyncratic universe.

Dobson, J., Dobson, R., & Kessinger, Jr. (1980). Staff development: A humanistic approach. Washington, DC: University press of America, Inc. Permission for use in this practicum has been obtained.

V. What do you believe about intellectual development?

A5 Intelligence, is for the most part, a function of environmental conditions. Persons possess different levels and amounts of intelligence.

B5 Focuses as much on learning style as on learning rate. Readiness for learning is a complex interplay of social, physiological, emotional, and intellectual development.

C5 Emphsizes that intellectual development proceeds from "wholes" to "parts" or from a simplified whole to more complex wholes. Sees intellectual potential as already existing within the individual as opposed to a phenomenon to be developed or realized.

VI. What do you believe about knowledge?

A6 Submits the existence of a central body of knowledge that must be transmitted to all. The truth is preexistent to the learning of it. The test of truth is its correspondence to reality.

B6 Emphasizes that knowledge is rooted in experience. Knowledge is therefore tentative. As individuals and situations change then what is true will also change. Workability is the test of truth.

C6 Submits that the only thing a person can be certain of is that they experience a stream of thoughts and feelings. Truth is an individual matter.

VII. What do you believe about society?

A7 Sees the function of schooling as preserving social order and building new social orders when the public has decided they are needed (preservation of the culture). The task of the school is to develop a standardized student-citizen as the product. Tendency is toward a meritocratic society.

B7 Society is a process in which individuals participate. The major role of the school is to teach the adults of tomorrow to deal with the planning necessarily involved in the process called society. Education must serve as a source of new ideas.

C7 Specifies that the way to improve society is through improving the quality of individuals, not through improving institutions. The school's primary task is individual; that is, the school should concentrate upon the development of absolute freedom in the child. The tendency is toward an egalitarian society.

A Composite score - Essentialism - Behaviorism

B Composite score - Experimentalism - Cognitivism

C Composite Score - Existentialism - Humanism

PART II

I. What do you believe about instruction?

A9 Focus is on indoctrination. The transmission of verifiable facts is paramount. Instructional activities are preplanned with specific performance objectives clearly stated.

B9 The role of the teacher is seen as learning manager and consultant whose primary task is to orchestrate the learning environment.

C9 Instructional behavior of the teacher is determined by the learner and occurs only by invitation from the learner. Freedom of the learner is central to the instructional act.

II. What do you believe about curriculum?

A10 Curriculum is highly structured and content centered; it is predetermined and logical. It consists of a common core of subject matters, intellectual skills, and accepted values that are essential and are to be transmitted to all students.

B10 Future utility and universalism are considered in the selection of content. The sequencing of content is based on identified stages of development. Learning experiences are generally problem centered.

C10 The curriculum is viewed as dynamic and emergent and a consequence of the students needs, wants, and desires. Each student is seen as an unlimited reservoir of curriculum.

III. What do you believe about organization?

A11 The organizational arrangement is rigid and orderly in nature; emphasis is on management and efficiency. Time-space are segmental.

B11 Flexible scheduling is related to instructional needs of the staff. Individualized instruction occurs by pacing the individual through study sequences.

C11 Individual pupils plan their own use of time within limits of personal and social order. The organization provides for the interdisciplinary nature of education; no area of knowledge can exist independent of all other areas of knowledge.

IV. What do you believe about content?

A12 The content is decided by the state. Suggests the desirability of a shared corpus of content. The planners task is the identification of common interests.

B12 Emphasis is on a balance between the content-centered curriculum and the process curriculum.

C12 Concerned with process skills that enable the person to know, to think, to value, to feel, and to act. The quality of being is more important than quality of knowing; knowledge is a means of education, not its end.

V. What do you believe about materials and resources?

A13 Emphasis is on materials that correlate with a diagnostic approach and that can be easily prescribed such as programmed materials, teaching machines, subject matter programs, learning packets, and tests.

B13 Emphasis is on a wide range of materials and resources.

C13 Resources are limited only by teachers' and students' imaginations.

VI. What do you believe about evaluation?

A14 Evaluation reveals itself in the form of measurement and is based on comparisons and is product oriented. Evaluation standards and procedures are determined by authority and imposed upon students.

B14 Focuses on what is learned and attempts to utilize this information in prescribing future tasks. Attempts to evaluate critical thinking, problem solving, and higher order cognitive skills.

C14 Focuses on self evaluation. External feedback is available upon student requests and is a shared experience.

Appendix M

EXAMPLE LEARNING MATERIAL

Instructional Objective: When shown a picture of a human skeleton, student will be able to identify and name 10 major bones of the body.

Learning Activity #1:

Materials: individual labels with the name of each bone
individual pictures of the bones

Activity: student matches each label to the corresponding picture

Storage container: box

Learning Activity #2:

Materials: individual labels with the name of each bone
large picture of a human skeleton

Activity: student lays the label on the picture and points to the appropriate bone

Storage container: small box for labels
tray to hold picture and box

Learning Activity #3:

Materials: papers with the outline of a human skeleton

Activity: student colors a bone on the outline and writes the name of the bone at the bottom of the page

student compiles a notebook with one illustration for each bone

Storage container: file folder in filing cabinet (color coded or numbered if part of a sequence of activities)

Learning Activity #4:

Materials: paper with the outline of a human skeleton names of the bones in columns on each side

Activity: student draws a line from the name of the bone to the appropriate bone in the skeletal outline

Storage container: file folder in filing drawer used to store tests

Appendix N
WORK CONTRACT EVALUATIONS

	No. of activities suggested on work contract	No. of Activities completed	Evaluation Provided	Objective Achieved
Student A:				
1. Given story problems involving subtraction and addition, student will successfully solve the problems.	2	2	yes	yes
2. When shown a penny, nickel, dime, and quarter, student will correctly identify the coins.	6	6	yes	yes
3. Given a problem which requires the addition of money, student will correctly compute the answer.	8	8	yes	yes
4. When asked the value of a nickel, dime, quarter, or half dollar, student will correctly state the equivalency of each.	7	7	yes	no
5. When asked, student will recite numbers in correct sequence from 1 to 100.	5	5	yes	yes
6. Given a numeral, student will identify the numeral that comes before and after it.	2	2	yes	yes
7. Given a series of numerals with one omitted, student will identify missing numeral.	2	2	yes	yes
8. Shown clocks indicating times of even hours, half hours, and quarter hours, student will correctly state the times.	7	7	yes	yes

9. Shown clocks indicating times of minutes other than hour, half hour, or quarter hours, student will correctly state the times.	3	3	yes	yes
10. Given small booklets at a preprimer level, student will read them and correctly answer questions about the stories.	35	35	yes	no
11. Given a series of reading textbooks ranging from preprimer to 1st-grade reading level, student will read them and correctly answer questions about the content.	daily	daily	yes	yes
12. Given pictures and objects, student will correctly identify the corresponding word.	11	11	yes	yes
13. Given lists of words, flashcards, or isolated words from a story, student will correctly read each word.	11	11	yes	yes
14. When dictated 3 and 4-letter words, student will correctly spell the words.	17	17	yes	yes
Student B				
1. Given story problems involving subtraction and addition, student will successfully solve them.	2	2	yes	yes
2. When shown a penny, nickel, dime or quarter, student will correctly identify the coin.	5	5	yes	yes
3. Given a problem which requires the addition of money, student will successfully compute the answer.	2	2	yes	yes

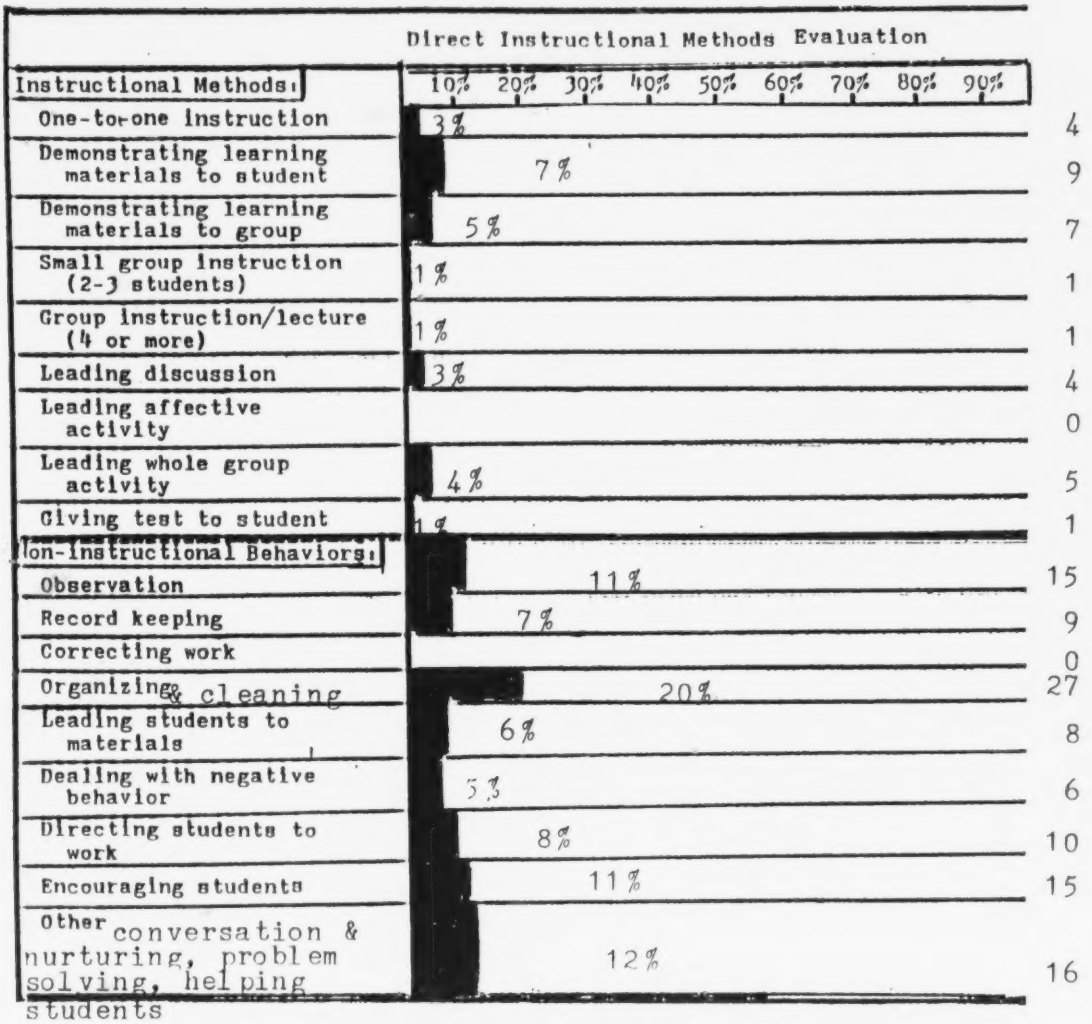
4. When asked the value of a nickel, dime, or quarter, student will correctly state the equivalency of each.	5	5	yes	no
5. Shown clocks indicating times of even hours, half hours, and quarter hours, student will correctly state the times.	6	6	yes	no
6. Shown 1/2, 1/3, 1/4, and 1/5 of a circle, student will correctly name them.	3	3	yes	yes
7. Given two-digit addition problems that do not require exchange, student will correctly calculate the answers.	8	8	yes	yes
8. Given two-digit addition problems that require exchange, student will correctly calculate the answers.	21	21	yes	yes
9. Given lists of words, flashcards, and isolated words from a story, student will correctly read the words.	16	16	yes	yes
10. Given words that end in silent e, student will correctly read them.	5	5	yes	yes
11. Given small booklets at a preprimer reading level, student will read the books and correctly answer questions about the stories.	52	52	yes	yes
12. Given a series of reading textbooks ranging from preprimer to 1st-grade level, student will read them and correctly answer questions about the stories.	daily	daily	yes	yes

Student C				
1. When questioned, student will correctly identify and define the parts of a circle.	8	7	yes	yes
2. Given the sides of a rectangle, student will correctly calculate the area of the shape.	8	8	yes	yes
3. When shown various triangles, student will correctly identify each triangle.	9	9	yes	yes
4. Given unreduced fractions, student will correctly reduce the fractions to simplier forms.	2	2	yes	yes
5. Given words misspelled on daily work, student will correctly spell the words.	18	18	yes	yes
6. Given words from a graded list, student will correctly spell them.	weekly	weekly	yes	yes
Student D:				
1. Given problems involving the subtraction and addition of fractions with different denominators, student will correctly calculate the answers.	3	3	yes	yes
2. Given story problems involving addition, subtraction, and multiplication, student will correctly calculate the answers.	10	10	yes	yes
3. Given multiplication problems with two-digit multipliers, student will correctly calculate the answers.	16	16	yes	yes

4. Given problems involving liquid measures, student will correctly calculate the answers.	2	2	yes	no
5. Given reading textbooks at a 4th-grade level, student will read stories and correctly answer questions about the stories.	weekly	weekly	yes	yes
6. Given various language workbooks, student will correctly complete the lessons.	4	4	yes	yes
7. Given books to read, student will adequately report on the stories.	5	5	yes	yes

APPENDIX O
DIRECT INSTRUCTIONAL METHODS EVALUATION

Class: Preschool
Teacher: A

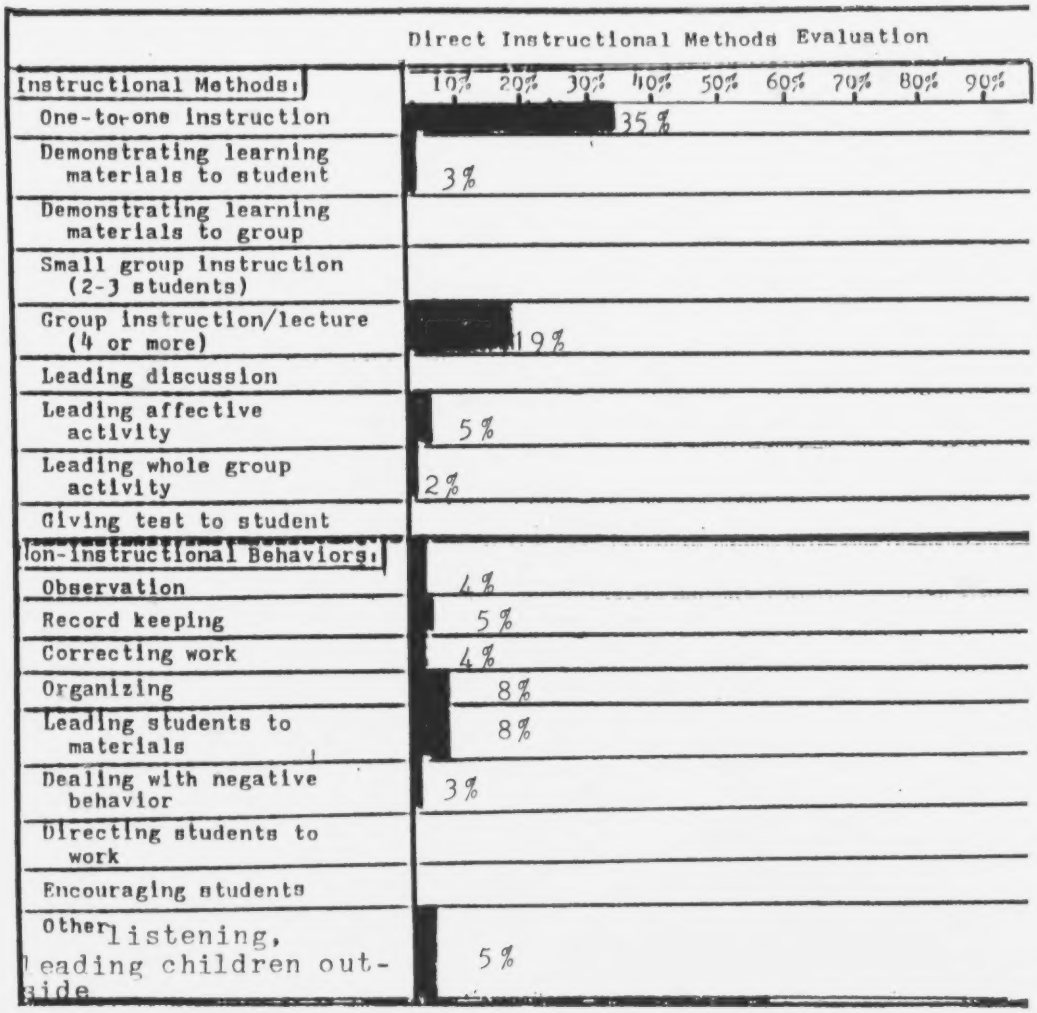


Number of different instructional methods used: 9

Percentage of time spent on instructional methods: 37%

Percentage of time spent on non-instructional methods: 68%

Class: Kindergarten and preschool
Teacher: B

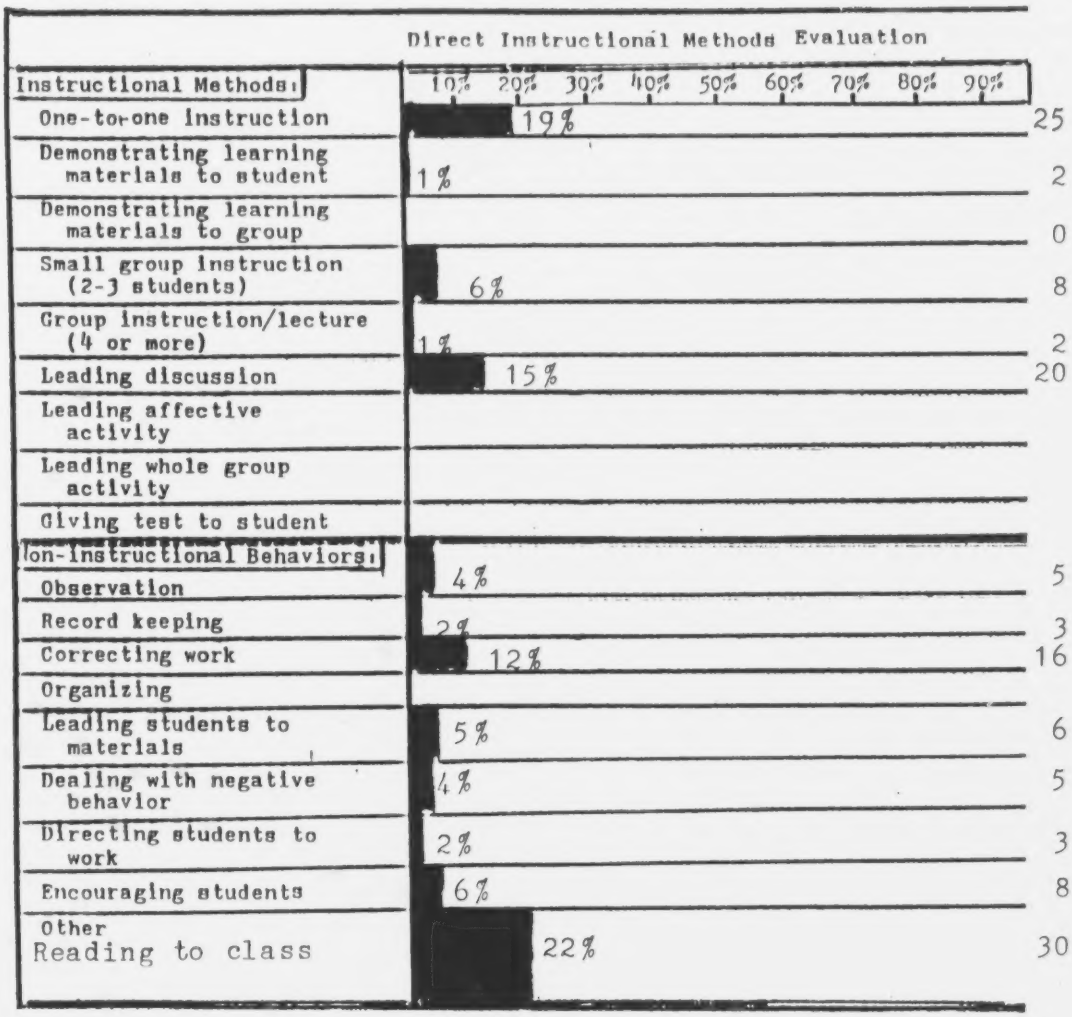


Number of different instructional methods used: 5

Percentage of time spent on instructional methods: 64%

Percentage of time spent on non-instructional methods: 37%

Class: Lower Elementary
Teacher: C

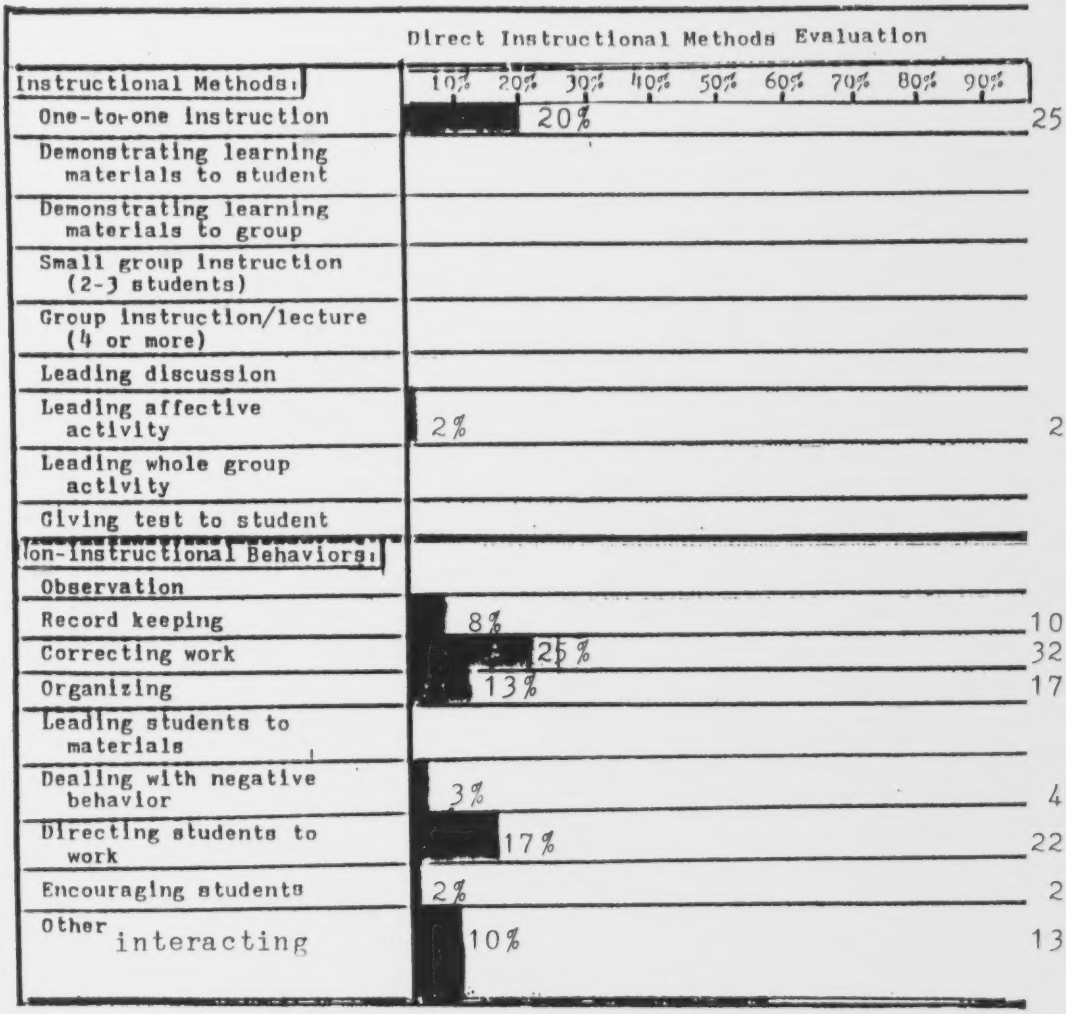


Number of different instructional methods used: 6

Percentage of time spent on instructional methods: 64%

Percentage of time spent on non-instructional methods: 35%

Class: Middle Elementary
Teacher: D



Number of different instructional methods used: 2

Percentage of time spent on instructional methods: 32%

Percentage of time spent on non-instructional methods: 68%

Appendix F
PEABODY INDIVIDUAL ACHIEVEMENT TEST SCORES

	Math	Reading Recog.	Reading Comp.	Spelling	General Info.	Total
Student 1						
Before:						
Grade 1.4						
Age 7.0						
Grade Placement	2.2	2.2	2.1	1.7	3.8	2.2
Grade Percentile	77	88	74	62	95	87
Age Percentile	56	65	52	46	88	58
After:						
Grade 1.9						
Age 7.5						
Grade Placement	3.3	3.1*	4.2	2.9	4.3	3.5*
Grade Percentile	91	90 *	95	90	96	96 *
Age Percentile	77	73 *	89	73	88	83 *
Student 2						
Before:						
Grade 1.4						
Age 6.9						
Grade Placement	1.7	1.4	2.1	1.2	2.7	1.6
Grade Percentile	57	40	74	28	76	57
Age Percentile	49	42	60	34	70	45
After:						
Grade 1.9						
Age 7.2						
Grade Placement	2.2	1.8	2.1	2.3	3.9	2.3
Grade Percentile	64	58	61	76	92	79
Age Percentile	56	52	52	63	89	62

* These scores could have been higher: examiner stopped test prematurely.

	Math	Reading Recog.	Reading Comp.	Spelling	General Info.	Total
Student 3						
Before:						
Grade 1.4						
Age 7.8						
Grade Placement	1.5	1.8	-	1.5	3.5	1.1
Grade Percentile	53	73	-	44	91	30
Age Percentile						
After:						
Grade 1.9						
Age 8.1						
Grade Placement	1.8	2.2	2.0	1.8	3.8	2.2
Grade Percentile	49	75	49	50	91	75
Age Percentile						
Student 4						
Before:						
Grade 2.4						
Age 7.5						
Grade Placement	4.9	7.6	7.2	5.3	6.0	6.0
Grade Percentile	95	*	98	95	98	*
Age Percentile	93	*	*	95	98	99
After:						
Grade 2.9						
Age 7.1						
Grade Placement	9.6	7.3	9.2	4.6	7.5	7.4
Grade Percentile	*	*	*	88	*	*
Age Percentile	*	98	*	88	*	*

* Off scale

	Math	Reading Recog.	Reading Comp.	Spelling	General Info.	Total
Student 5						
Before:						
Grade 1.4						
Age 6.7						
Grade Placement	2.2	1.8	-	1.6	1.9	1.1
Grade Percentile	77	73	-	53	60	30
Age Percentile	71	68	-	57	58	37
After:						
Grade 1.9						
Age 7.0						
Grade Placement	2.4	3.0	2.1	1.8	2.4	2.2
Grade Percentile	73	89	61	50	66	75
Age Percentile	64	78	52	51	60	58
Student 6						
Before:						
Grade 1.4						
Age 6.0						
Grade Placement	3.3	5.0	3.3	3.2	2.2	3.2
Grade Percentile	97	*	95	98	67	*
Age Percentile	*	*	*	*	77	*
After:						
Grade 1.9						
Age 6.5						
Grade Placement	4.0	5.4	2.9	5.3	3.7	4.0
Grade Percentile	97	*	89	*	89	*
Age Percentile	*	*	94	*	95	*

* Off scale

	Math	Reading Recog.	Reading Comp.	Spelling	General Info.	Total
Student 7						
Before:						
Grade 2.5						
Age 8.3						
Grade Placement	2.4	2.4	2.2	2.4	4.7	2.7*
Grade Percentile	45	47	40	47	90	74 *
Age Percentile	30	32	20	28	79	37 *
After:						
Grade 2.9						
Age 8.8						
Grade Placement	3.1*	3.5	3.4	2.5	4.7	3.4*
Grade Percentile	57 *	70	67	40	85	69 *
Age Percentile	40 *	52	54	26	76	49 *
Student 8						
Before:						
Grade 3.2						
Age 8.4						
Grade Placement	5.3	5.8	5.0	3.8	-	-
Grade Percentile	87	91	82	67	-	-
Age Percentile	88	89	86	67	-	-
After:						
Grade 3.4						
Age 8.11						
Grade Placement	6.0*	6.4	5.3	4.2	-	-
Grade Percentile	83 *	89	76	59	-	-
Age Percentile	86 *	90	81	63	-	-

*these scores could have been higher: examiner stopped test prematurely.

	Math	Reading Recog.	Reading Comp.	Spelling	General Info.	Total
Student 9						
Before:						
Grade 4.2						
Age 9.3						
Grade Placement	9.2	12.4	9.2	*	8.4	9.0
Grade Percentile	97	*	95	*	96	98
Age Percentile	97	*	95	*	97	99
After:						
Grade 4.9						
Age 9.11						
Grade Placement	10.8	10.3	12.3**	12.4	-	-
Grade Percentile	97	96	98 **	*	-	-
Age Percentile	98	98	98 **	*	-	-
Student 10						
Before:						
Grade 4.2						
Age 9.3						
Grade Placement	8.9	10.3	10.4	4.6	-	-
Grade Percentile	96	98	98	60	-	-
Age Percentile	97	*	98	59	-	-
After:						
Grade 4.9						
Age 9.10						
Grade Placement	*	12.4	11.8	8.7	-	-
Grade Percentile	*	98	98	95	-	-
Age Percentile	*	*	98	93	-	-

* Off scale

** These scores could have been higher; examiner stopped testing prematurely.

	Math	Reading Recog.	Reading Comp.	Spelling	General Info.	Total
Student 11						
Before:						
Grade 5.3						
Age 10.7						
Grade Placement	8.6	11.0	6.2	10.7	-	-
Grade Percentile	87	95	63	96	-	-
Age Percentile	87	96	64	96	-	-
After:						
Grade 5.9						
Age 11.1						
Grade Placement	8.2	11.8	10.2	11.0	10.1	10.4
Grade Percentile	79	95	91	95	91	94
Age Percentile	77	95	89	94	89	92
Student 12						
Before:						
Grade 3.3						
Age 8.4						
Grade Placement	4.0	4.2	3.5	5.3	-	-
Grade Percentile	70	77	59	86	-	-
Age Percentile	70	74	62	86	-	-
After:						
Grade 3.9						
Age 8.11						
Grade Placement	6.7*	4.7	4.5	4.1	-	-
Grade Percentile	88 *	67	64	55	-	-
Age Percentile	90 *	71	71	59	-	-

* These scores could have been higher: examiner stopped testing prematurely.

	Math	Reading Recog.	Reading Comp.	Spelling	General Info.	Total
Student 13						
Before:						
Grade 4.2						
Age 9.5						
Grade Placement	4.4	5.6	7.2	6.5	6.5	6.0
Grade Percentile	54	75	89	84	89	84
Age Percentile	54	74	89	82	90	83
After:						
Grade 4.9						
Age 10.0						
Grade Placement	7.6	8.1	7.8*	9.8	7.8	8.0*
Grade Percentile	84	91	87 *	97	91	94 *
Age Percentile	83	89	86 *	9	90	91 *
Student 14						
Before:						
Grade 5.3						
Age 10.9						
Grade Placement	6.4	7.6	6.5	4.9	-	-
Grade Percentile	67	86	71	50	-	-
Age Percentile	59	81	64	36	-	-
After:						
Grade 5.9						
Age 11.4						
Grade Placement	6.4	9.4	7.5	5.3	7.5	7.1
Grade Percentile	59	88	73	40	77	74
Age Percentile	53	84	69	32	72	64

* these scores could have been higher; examiner stopped testing prematurely.

Appendix Q

SELF CONCEPT SCORE SHEET Summary

Middle Elementary without Teacher

STANFORD CENTER FOR RESEARCH AND DEVELOPMENT IN TEACHING

Student	Physical ability	Attractive appearance	Convergent mental	Social relations same sex	Social virtues	Divergent mental	Work habits	Happy qualities	School subjects	Total
A	+ .25	+ .75	+ .5	+ .75	+1.	+ .75	+1.	+ .25	+ .75	+ .51
B	0	-1.	- .25	-1.5	- .75	-1.38	+ .25	- .25	- .63	- .65
C	- .5	- .75	- .75	- .25	- .75	+ .25	- .25	- .75	- .63	-3.8
D	- .75	0	+ .13	+1	- .75	+ .13	+ .25	- .5	- .13	- .04
E	-1.25	-1.25	-1.5	-1	- .5	-1	- .5	-1.5	-1.13	-1.1
F	-1.75	-1.5	- .75	+1.5	- .75	- .63	- .75	- .25	- .63	- .63
G	-1.5	-2.75	-1.63	-2	-1.5	-2.13	-1.75	- .5	-2.25	-1.83
H										
Total change	-12.25	-8	-4.25	-1.5	-4	-4.01	-1.75	-3.5	-4.65	-7.51
Average	-1.75	-1.14	- .61	- .21	- .57	- .57	- .25	- .5	- .66	-1.07

SELF CONCEPT SCORE SHEET Summary

Middle Elementary with Teacher

STANFORD CENTER FOR RESEARCH AND DEVELOPMENT IN TEACHING

Student	Physical ability	Attractive appearance	Convergent mental	Social relations same sex	Social virtues	Divergent mental	Work habits	Happy qualities	School subjects	Total
A	-1.25	- .25	+ .38	- .25	0	- .38	+ .25	- .25	+ .13	- .33
B	0	- .75	+ .75	-1.25	- .75	-1.63	+ .25	- .25	+ .63	- .67
C	- .25	0	-1.38	-1.5	-1	- .75	- .5	-1.5	+ .88	- .85
D	0	- .5	0	+ .5	+ .5	- .25	+ .31	+2.5	+1.13	- .06
E	- .75	- .75	- .88	- .75	- .25	- .63	0	- .5	+ .75	- .63
F	-2	-1.5	- .71	+ .75	- .25	- .88	- .75	0	+6.3	-1.5
G	-2.75	-2	-2.38	-1.75	- .75	-2.25	-1.5	- .5	+2.13	-1.92
H	- .5	- .5	-1.38	+ .75	-1	-1.13	-1.5	- .25	0	- .67
Total change	-7.5	-5.75	-8.36	-3.5	-3.5	-7.9	-3.44	- .75	+11.95	-6.63
Average	- .94	- .72	-1.05	- .44	- .44	- .99	- .43	- .09	+1.49	- .83

Appendix R
SUMMARY OF TEACHERS' COMMENTS FROM
REFERRAL FORM

Student 1:

Strengths, before--

kind and friendly to others

attempts problem solving

Strengths, after--

readily becomes involved in activities

Student 2:

Strengths, before--

good concentration

values neatness in work

Strengths, after--

is eager to help others

Student 3:

Strengths, before--

works at difficult tasks

considerate of others

Strengths, after--

is very well rounded

Student 4:

Strengths, before--

kind to others

good concentration

Strengths, after--

cooperates well with all of her peers

Student 5:

Strengths, before--

stays on task very well

needs little help

Strengths, after--

shares readily and is eager to help others

Student 6:

Strengths, before--

friendly and kind to peers

enjoys hands-on learning

Strengths, after--

very coordinated, which he uses to his advantage

Student 7:

Strengths, before--

always willing to help

concentration and fine motor skills developing rapidly

Strengths, after--

pleasant child

Comments, after--

physical handicap prevents social interaction due to lack of mobility

Student 8:

Strengths, before--

kind and helpful to teacher and peers

tries solving problems before seeking help

Strengths, after--

is very accepting of others

Student 9:

Strengths, before--

shares willingly

always remembers materials for projects

good organizational skills

Strengths, after--

is very task-oriented but not always on the task he is to be doing

December 15, 1987

Carol M. Charles, Ph.D.
Professor of Education
College of Education
San Diego State University
San Diego, CA 92182-0158

Dear Dr. Charles,

I am presently writing a practicum paper for my Doctorate of Education with Nova University, Ft. Lauderdale, Florida. The practicum is entitled "A Teacher Training Program to Develop Skills Needed to Individualize Preschool and Primary Classrooms."

I administered the Self Concept Scale from the Stanford Center for Research and Development in Teaching to a group of children and would like to include a copy of the scale in the appendix of my practicum report. The Self Concept Scale was included in your book Individualizing Instruction (1976). I need permission in writing to include the scale in my report. If this is acceptable please send permission to:

Sharon Carlson
[illegible] Friendship [illegible]
Lancaster, Pa. 17601

Thank you very much for your consideration of this request.

Sincerely,

Sharon Carlson

Sharon Carlson
[illegible] 291-9183

Permission is granted.
Good luck in your studies.

C. M. Charles

194 1-5-88

December 15, 1987

Mr. Kelly L. Reed
Rights & Permissions Editor
University Press of America, Inc.
4720 Boston Way
Lanham, MD 20706

Dear Mr. Reed,

I am writing in response to your letter of December 4, 1987, requesting more information before granting permission to reprint from Staff Development: A Humanistic Approach by Dobson, Dobson and Dessinger.

I administered the Educational Belief System Inventory and the Educational Practice Belief Inventory, pages 125 through 143 to a group of teachers and would like to include a copy of these inventories in the appendix of my practicum. I would also like to include the directions for scoring, pages 147 through 150 and the sub test on pages 155 through 160.

I would appreciate your permission to do this. Thank you for your consideration.

Sincerely,

Sharon Carlson

Sharon Carlson
555 Friendship Ave.
Lancaster, Pa. 17601
(717) 291-9183

Permission granted in accordance with the terms stated above provided full credit to author, title, copyright notice, and publisher accompanies the reprint. ~~In addition, we request a file copy of the work when published.~~

Date: 1/4/88 **By:** Kelly L Reed

(Miss)

Kelly L. Reed
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SUSAN S. WHITE, M.A.

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Minnetonka, Minnesota 55343

612-542-9486

Tutoring
Social Skills Training
Workshops & Consultations

Specialist In:

Learning Disabilities
Drama Therapy
Social Skills/Self-esteem

1/13/88

Dear Sharon,

You have my permission to use the assessment checklist in my manual Social Skills and Self-Esteem Development Through Drama Therapy Activities.

Sincerely,

Susan S. White, M.A.